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ABSTRACT

The Kansas City School Behavior Project was intended to devise and test the effectiveness of a program of action for the treatment of mild behavioral disturbances in children in the school setting. The program was expected to prevent, to some extent, severe behavioral disturbances among these children in the adolescent years, and to have an effect on behavior in the total community as well as in the school setting. The design was executed within the resources of personnel and time budget of the regular school system. The project was intended to be a pilot demonstration -- a model for other schools and other communities. The project sought to train teachers in techniques and methods aimed toward improving classroom learning conditions, thereby preventing the mildly disturbed child from progressing to more serious problems. Major emphasis of the training program focused on the development of interpersonal skills, group dynamics and management, and utilization of small group interaction in the classroom. A variety of data was collected in the areas of teacher ratings, pupil absences, juvenile court and police data, mental health and pupil followups. Extensive data tables are included. (Author/CKJ)

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Preventive Outcomes of Small Group Education with School Children: An Epidemiologic Follow Up of the Kansas City School Behavior Project

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EVALUATION REPORT

Preventive Outcomes of Small Group Education with School Children: An Epidemiologic Follow Up of the Kansas City School Behavior Project

Prepared by Wynona S. Hartley, Ph.D.
Principal Investigator

NIMH Grant #1 R01 MH20594-01

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January, 1976

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This report contains both data and opinions. The opinions, of course, are my own. But I could never have collected the data or completed the analysis without help from many people. It is a pleasure to list their names.

One of the project consultants became a co-worker. Ruth Hassanein worked with me in nearly all phases of the analysis, supervising the necessary computer work, assisting with the interpretation of results and sharing in many discussions dealing with data, outcome and implications, always striving for sound analysis, and economy and clarity of expression. Ruth should be regarded as a co-author of this report.

I am indebted to the Institute for Community Studies for permitting me to take up the evaluation of the project where they had left off, supplying me with their raw data, files and reports. They have continued to be helpful whenever requests have been made. Dr. Robert Barnes, an originator of the project, helped with background, and as Acting Director of the Epidemiologic Field Station for Mental Health and Executive of the Greater Kansas City Mental Health Foundation hired me as a senior research associate and designated me to carry on the follow up of the project at the Field Station. When I joined the Department of Human Ecology and Community Health at the K.U. Medical School, the Foundation released

its interest so I could bring the project to Kansas. Staff at the Center for Epidemiologic Studies, and the Review Committee made funding possible, to bring the follow up to the Medical School. The Center staff has been most helpful in responding to special needs for extensions of the grant period, making possible the final quality of the analysis.

During the early work of the follow up at the Field Station, Judith Walker served ably as Research Assistant, collecting all of the follow up data from the public schools, mental health center and the juvenile court records.

At the Medical School, Don Grisham supervised the transfer to the computers, verifying the data to assess any loss. Ron Wheeler was an able Assistant, compiling our first report and giving valuable assistance in dealing with the school environment variable. Joe Viets also worked with the data, particularly the counts of problem behavior by study groups. The secretarial group serving the Department of Human Ecology, and particularly Beverly Warren, prepared the many documents and reports.

In the medical community, I am particularly grateful to Drs. Bob Barnes and Bill Hollingworth for their continuing interest in the project and a serious evaluation of its outcome.

The Kansas City Board of Education personnel have been valuable in many ways. Drs. Bob MacNeven, Mary Meehan and Earle Kenyon were staff members at the school district and facilitated computer searches for our cohort, access to school records and other school personnel. Jim Baker did extensive work in the computer search. Dr. Clyde Baer, then Director of Research, also helped in many important ways. Dr. Malcolm Bliss made the records of the Pupil Services Division available, and countless school secretaries helped in the various school offices. Many other people in the District gave assistance during the follow up study.

INTRODUCTION

The Joint Commission on the Mental Health of Children and Youth suggested that we have, in our nation alone, 95,000,000 children in need of remedial help. If public school teachers can be taught the Kansas City way, we may be able to reach a significant portion of those children, and prevent others from becoming "problem" statistics.

The Kansas City School Behavior Project was intended to devise and test the effectiveness of a program of action for the treatment of mild behavioral disturbances in children in the school setting. The program was expected to prevent, to some extent, severe behavioral disturbances among these children in the adolescent years, and to have an effect on behavior in the total community as well as in the school setting. The design was executed within the resources of personnel and time budget of the regular school system. The project was intended to be a pilot demonstration -- a model for other schools and other communities.

Early follow up of the pupils in the project indicated that there might be positive results for one socio-economic segment three years after the experiment took place. This pattern of differences was observed in referrals, suspensions, absence rates and teacher ratings. After six years of intensive effort the payoff appeared to be emerging from the mountain of data which had been gathered. We had to know if it was dependable, and whether it could be broadened to behavior outside the school system. We felt we had to know what the conditions were under which it worked or failed to work. We proposed an epidemiologic follow up, for the one socio-economic segment of the original project which was then funded by the NIMH Center for Epidemiologic Studies.

Our strategy for the analysis was: 1) to test again for positive or negative outcome, with emphasis on the ninth grade year, but also checking for earlier findings which might tie outcome more closely to intervention; 2) to test whether the apparent ninth grade year finding could be shown to persist into the following two grade years; 3) to test whether this apparent prevention effect could be buttressed with data from outside the school system, giving it both greater credence and value; and 4) to attempt to specify epidemiologic conditions under which the prevention effect was valid or invalid, or was more or less pronounced. If the data produced answers in these areas, we felt we could reasonably make recommendations for the design of future intervention efforts for the health of children and youth consistent with our findings and our understanding of the relationships among the important factors delimited in our analysis.

Our attempt to answer these questions required data collection: 1) of absence rates, teacher ratings and family file referrals for behavior problems for two further school years, extending the time of the follow up to five years, or the eleventh grade year; and 2) police records and juvenile court records for the entire life of each child in the socio-economic cohort up to and including the eleventh grade year. Many other indicators might have been used. Our concern was that we duplicate the earlier data on a longer time line, and that we utilize real-life variables; records which are kept as an ordinary process, not conjured up for our benefit, and records which are consequential in the lives of children in their communities.

In order to give the most conservative answer to these questions we assumed the null hypothesis, pooled the experimental and control group frequencies, and compared the experimental condition with the (pooled) expected frequencies. We also made the standard experimental/control comparisons characteristic by characteristic, for investigators more familiar with that process and its outcome properties.

Processing the data from previous follow up investigations, and some new data from our search indicated that the Experimental and Control groups were indeed comparable. Differences in the outcome charts should not be attributed to loss in follow up, or dropping out, or social and economic differences. Loss rates were well within acceptable limits (less than 10% over five years) and a review of the characteristics of remaining pupils does not suggest any special bias. There were no statistically significant differences in dropping out, in the Experimental and Control comparisons. The neighborhoods the elementary schools served were carefully matched for socio-economic status. All neighborhoods involved were in one socio-economic category, the lowest in Warners five category breakdown. Bussing had not yet begun. Stanford-Binet scores produced means for the two groups within .3 of each other. Behavior problem data recorded in the schools, juvenile court and the police files, if anything, favored the control condition.

Early analysis for comparability of the Experimental and Control groups suggested three epidemiologic variables which might affect outcome: 1) sex, 2) race, or ethnic identification and 3) later school environments in junior and senior high. The experiment took place in sixth grade. From there, most students went on to junior highs, scattering somewhat in the various schools in their part of the school district.

RELATED EPIDEMIOLOGIC STUDIES IN JUVENILE DELINQUENCY

Epidemiology is a study of relative risks. The epidemiologist estimates the risk of the appearance of a condition in one population group and compares this risk with that for another group. The risk can be expressed as the proportion of the total population group who actually get the condition. The estimate of risk requires two numbers: the number of people in the total population, and the number who had the condition.

For study purposes, groups may be formulated in various ways: for instance, people living in certain areas or people of different ages or races. If the right groups are chosen, a comparison will show which people are most vulnerable to a condition. Finding out why these particular people are so vulnerable should lead to better methods of control.

Epidemiologic methods are as well adapted to the study of behavior problems as to the study of cholera. Behavior problems are distributed unevenly in the community, and appear to be related to both social and personal influences. Individuals are not equally susceptible to those influences.

The risk of delinquency, if we can call it that, may be defined as the number of individuals in a particular classification who become delinquent out of each thousand in a particular classification. Mathematically, this is a problem of division: Risk equals delinquents divided by population. The result is then multiplied by 1000 to convert it to rate per 1000 at risk. Thus to calculate risk we need to know only the number of people of the same type who might have become delinquent. When the population is divided in complex ways, such as by sex, age, and race simultaneously, it may be difficult to determine both the numerator and the denominator.

Three major studies of delinquency have been made by epidemiologic methods. In 1961, J.W. Eaton and K. Polk published a study of the delinquent juveniles of Los Angeles. In 1963, S.R. Hathaway and E.E. Monachesi, in a study of adolescent personality, related juvenile delinquency in their study population to their entire group of subjects. In 1969, V. Eisner published his study of San Francisco delinquents focussing on the significance of labeling, and the possibility that the correlation of delinquency with race might not be independent of such other factors as income, place of residence and family structure.

Eaton and Polk dealt with Probation Department records for 1956. They looked at the effects on delinquency of age, sex, ethnic group, marital status of parents, and geographical mobility. They showed rates for boys as four times greater than those for girls. Minority group membership was significant. Negro and Mexican minorities had far higher rates than the white majority. Japanese rates were lowest of all. Other data seemed to offer an explanation: children from broken homes had an increased risk of delinquency, and the Japanese group had fewer broken homes. The Eaton and Polk study also showed that recorded rates of recidivism reflected administrative procedure far more than they reflected actual delinquencies. Geographical mobility did not seem to influence rates to any great extent. Eaton and Polk suggested control measures be aimed at increasing family stability. Hathaway and Monachesi studied ninth grade white children to whom they gave the M.M.P.I., and followed them for three to four years. They divided their population by age, size of community, father's occupation, type of family and intelligence of the child. They found delinquency rates decreased as their subjects reached nineteen years of age, varied inversely with socio-economic status, and were higher for children with broken homes. Rates did not vary with intelligence, but did vary inversely with high school rank. They also varied with population density, which the investigators related to occupation, as rates were very low for children of farmers. Hathaway and Monachesi also pointed out certain personality types who were liable to become delinquent.

Eisner, in a sophisticated factor analysis, found that four major elements were necessary to predict delinquency rates: 1) sex, 2) race, 3) economic conditions and 4) intrafamilial conditions. In order to explain all the variations in rates it was necessary to add the differences in behavior that characterize racial groups.

Eisner tested the possibility that number of parents in the home was the main factor explaining variations in delinquency rates, by equalizing his other factors. Delinquency rates were higher for both sexes in homes with less than two parents, except in the lowest income quartile non-white boys, where the rate was higher where there were two parents in the home. Further analysis indicated this finding might be related more properly to certain levels of low income in the Negro population only.

Our own research deals with a population defined somewhat as that of the Hathaway and Monachesi study: children who had been part of an educational experiment, and their control population. It has, however, somewhat the geographic base of Eisners census tract study in that the children are from known neighborhoods, in a single core city but in sixth grade classrooms matched for socio-economic status. A random assignment of classrooms to the experimental and control conditions should randomize such variables as sex, ethnic group, geographical mobility, marital status of parents and father's occupation, and tend to equalize any remaining economic conditions and age which have been shown to affect problem behavior rates.

This randomization and equalization of variables shown previously to be important in the development of problem behavior should permit us to determine the effect of the experiment on such behavior.

BACKGROUND AND SIGNIFICANCE

The Youth Development Project in Kansas City was an experiment performed in 1963 in the public schools to enhance the social-emotional development of individual pupils. The Project was originally directed by Dr. Robert Barnes, then Executive Director of the Greater Kansas City Mental Health Foundation, with the assistance of Thomas S. McPartland, Ph.D., and George J. Lytton, M.D. Dr. Paul Bowman, now Director of the Institute for Community Studies in Kansas City, was brought to Kansas City to head the project, and carried the major administrative load. Many other people have been substantially involved in the project. Dr. Oren Glick, during his years at the Institute for Community Studies, was responsible for the analysis which produced the positive finding at the close of the grant period. Grants were held first by the Foundation (MH 0535) and then transferred to the Institute (R11 MH 2303), and ended in December 1966. The Kansas City School District also held a grant dealing with this project, MH 02041, during the same period.

The project originated in the concerns of educators over the apparently growing problem of behavioral disturbances in the schools. A committee composed of representatives of The Kansas City, Missouri School District, The Greater Kansas City Mental Health Foundation, and the School of Education at the University of Missouri at Columbia met periodically for a number of months to explore together the nature of the problem and to develop ideas for action programs designed to alleviate the problem. The work of this committee culminated in an action-research proposal that was funded, as described above, by the National Institute of Mental Health.

The Kansas City Project was related in certain respects to the Ullman Study (Ullman, 1952), The Quincy Youth Development Project in Illinois (Bowman, 1956), the Mental Health Research Program of the St. Louis County Health Department in Missouri (Glidewell, 1957, 1959), The Human Relations Program of the University of Iowa (Ojemann, 1955), and the Cambridge-Somerville Youth Study (Powers and Witmer, 1951), which preceeded it in point of time. The reliability and predictive value of teacher ratings, the usefulness of several test instruments, knowledge about appropriate sequence and timing decisions, successful training program practices, and the necessity of pre-planned evaluation including control groups were some of the elements of these studies or their findings built into the Youth Development Project in Kansas City.

The impetus for the project thus derived from difficulties posed for the schools, and eventually for society generally, by pupils who, for one reason or another, did not function successfully or satisfactorily with their fellow human beings. Efforts to solve these problems through clinical service arrangements with the Foundation had proven that solution was inadequate to the need. It was literally impossible to give individual treatment to all children needing it. It was felt that any long range solution would require extensive effort on prevention of such problems rather than on treatment at a more serious stage. Such efforts, it was thought, might best be expended on the development of certain classroom methods and techniques in which teachers could be trained. These methods and techniques would be aimed toward producing learning conditions in the classroom which would be more emotionally healthful for all children, and which might thereby prevent the mildly disturbed child from getting to be a more serious problem.

The best account of the content of the training is contained in two published bulletins (A Teacher Training Program in Classroom Mental Health, 1964, The Use of Small Groups in the Classroom, 1964).

Teachers in the experiment were regular classroom sixth grade teachers in the Kansas City School System. Sixty teachers were selected from a pool of 90 volunteers. All socio-economic status levels were initially represented but representation at the highest levels was meager and the loss of several teachers eliminated experimental-control comparisons at the two highest levels of the five defined for the study. The classrooms, with their teachers were divided into two groups with rough matching of four variables: the socio-economic level of the neighborhood served by the school, and the sex, teaching competence as judged by the school administration, and years of teaching experience represented in the teacher cohort. One group served as the experimental group, and the other the control. The experimental teachers received the special training described above, in a summer work shop, and were given support throughout the experimental year.

The evaluation was completed, within the limitations of the grant, and included, in addition to many measures intended to investigate attitudinal and scholastic outcomes during the year of the experiment, certain follow up data, collected for the three years after the experiment, tracing the progress of the children in grades seven, eight and nine. Teacher ratings, absences, and central office family file records showed the children in the experiment, from the lowest socio-economic neighborhoods, superior to children in the matching control group, at the ninth grade.

The value of demonstrating a solid evaluation of one such program should be clear. Further data was gathered at the NIMH Epidemiologic Field Station and then application was made to the Center for Epidemiologic Studies for funds to complete the follow up, resulting in grant #1 R01 MH 20594-01, "An Epidemiologic Follow Up of a Cohort of School Children," and this report.

REMARKS: BACKGROUND AND SIGNIFICANCE

As Dr. Barnes pointed out in a presentation to the KU Roots of Responsibility Workshop earlier this fall the Kansas City School Behavior Project is (or was) the sort of project which will never be done again. It will not be done again for a number of reasons, not the least of which is that it represents one of those long-term expensive projects which are no longer in vogue. Current economic analyses suggest they may never be funded or carried out in the future. That is one reason to mine the data carefully and report any findings as extensively as possible. Another reason to present it is to indicate the importance of long term follow up if we are interested in and concerned about social and educational change projects, or projects which lead toward change. A third reason, and perhaps the most important ~~from his (and~~ our) point of view is that "there are aspects of this project which are quite applicable to most school systems, and which represent techniques and approaches which can still be used very effectively without any significant expenditure of funds." This was an experimental project and there was a tremendous amount of research effort involved because of that. This part of the project is not necessary to the operational aspects of the intervention.

When we went into the Youth Development Project we weren't thinking longitudinally to any extent. Only as things developed and we got into the evaluation and saw what we didn't find and had hoped to find did we see the necessity of the long term follow up.

The Mental Health Foundation was founded in Kansas City in 1952. It was from the outset, a rather interesting and unique organization. Among other things, it set up probably the first prototypical comprehensive community mental health center in the United States. It was one of two major projects for many many years of the Kansas City Association and Trust Foundation. The Institute for Community

Studies was the other. Homer Wadsworth, at that time president of the Kansas City Missouri School Board, came to the Mental Health Foundation and asked if there would be any way mental health people could do some prevention, instead of bragging about what was possible. He offered us $25,000 to get up out of our chairs and help the school system work something out. As the new Director, I couldn't say no to a $25,000 offer. We took the money in good faith, feeling that we would undoubtedly wipe out future emotional problems and maybe even physical problems for the 80,000 or so inner city school children of that time. Things got tough after that.

The grant was made with the clear cut idea that we work out something mutually agreeable and cooperative. Major planning was done with and by the top people in the school district and the mental health foundation: the Superintendent of schools Jim Hazlett, Assistant Superintendent, Arthur Gilbert, Louise Zimmer, Supervisor of Elementary Education, and the Director of Pupil Services, Bob MacNeven from the schools, and top people in general psychiatry, child psychiatry, administration and research from the foundation. The school people were very problem oriented, wanting something to help the classroom teacher with the severe behavioral problems exhibited by the school children, and which were becoming more and more overwhelming to the teachers. At this time, 1958 and 1959, integration was about five years old, and the beginning of the movement of the white population out of the district was apparent. The mental health professionals wanted to concentrate on prevention. Their model, from the public health standpoint, was that of primary prevention, while the school people were feeling pressed at the secondary or tertiary level. After six months of sparring, position papers and excellent discussions, often joined by Mr. Wadsworth, the school people won. I think that I have subsequently felt that was entirely right and proper.

The school people felt the proper point of entry was the junior high school. They said "That's where we really worry about him, and where he really gets out of control." (Outcome data later confirmed that problem counts at least for the SES V children, rise sharply after seventh grade). They were willing to compromise with the mental health staff's interest in starting with the younger children and we settled on a focus at the sixth grade level.

Once we agreed on a grade level, we had to tackle the questions of operational approach and evaluation. We had agreed on over all objectives: to develop an approach to the management of the mildly to moderately disturbed by the school teacher in her own classroom. We were trying to get away from referrals to the Child Research Council, Child Guidance Clinic, private psychiatrists and even school psychologists -- to develop within the classroom teacher the skills to manage the problems within their own classrooms unless they were severe disturbances or severe learning problems.

We tried to keep our focus so that we developed a program operationally that the teacher would not see as interfering with her educational efforts. In general, the techniques involved included the entire classroom at times, and at other times breaking the class down into a number of smaller work groups.

One major disagreement in the process of research design dealt with the extent to which we could judge success in terms of outcome studies of the children. Some thought we should confine our studies to the teachers attitudes and behavior. We invested considerable time and effort in the analysis of individual students cumulative case cards as a document for research purposes. This and other preliminary activities exhausted our initial funds, and a year and a half of our time.

We brought the National Institute of Mental Health into our planning process, very actively, working with Dr. William Hollister who was at that time an M.D. psychoanalyst on the staff in Washington, and interested in the kinds of preventive work we now associate with Dr. Will Edgerton at Chapel Hill. The final outcome was a successful research grant application. Funding involved two years of actual demonstration and three years of evaluation and follow up. The project was funded as of July 1, 1962. I was the first director, with the very capable assistance of Dr. Robert MacNeven of the school district. Dr. Paul Bowman, from the DeKalb Youth Development Project, joined us as director a few months later.

We anticipated dealing with approximately 3600 students the first year, which will give you some idea of the problems we were dealing with, the numbers of teachers, etc. A tremendous amount of data was generated. Most of the data was not totally analyzed. The only consistent finding was for pupils in the lowest socio-economic level, in favor of the experiment, for boys in the ninth grade year. This was the initial finding, and the one which motivated the long-term follow up.

In the long term follow up we dealt only with this lowest socio-economic group. It was not just a small proportion of the sample. It was a significant portion of the sample, and the group which was causing the most concern among the school personnel. It was the group dropping out; specially the lower class male child, as he moved into adolescence. These findings may also be of particular interest to the court.

There seemed to be no possibility of following up beyond the ninth grade since funds had run out by this time, and the Vietnamese war was heating up, the great society was beginning to make less and less funds available for behavioral science research. At this point in time, NIMH decided to set up a series of epidemiologic field stations around the country and we were one of the places they negotiated with. As it turned out, we had the only one they ever established. The Field Station was operated as a contract with the Mental Health Foundation, and in the process of getting it operational, I was the original director. We developed a number of projects. One of them was the follow up of the apparently positive findings of the Kansas City Youth Development Project. One of the people we hired was Dr. Hartley, and this became her responsibility, so that then we had the opportunity to follow these children after ninth grade and in general to utilize the same parameters which had been used before. This made possible a significant and crucial extension of the project beyond the original three years and through the eleventh grade -- at least five years beyond the beginning of the experimental phase.

It became possible for us to look at rather exciting preliminary findings which indicated that by gosh YOU COULD DO SOMETHING ABOUT WHAT HAPPENS TO A KID IN HIGH SCHOOL, IN TERMS OF SOCIAL BEHAVIOR, BY TEACHING CERTAIN SKILLS TO A SIXTH GRADE SCHOOL TEACHER. This made us very excited about the possibility of seeing if this indeed turned out to be true.

no caps

X ind's Barnes

[Principal Investigator Hartley described the major findings at this point in the Workshop. Presentation sent in as Report #3.]

Paul Bowman, who directed the Kansas City Youth Development/ School Behavior project from shortly after the original NIMH grant was made available through the three year follow up, now heads the Kansas City Institute for Community Studies. He reports, It's exciting for me, after these years to see this kind of data on the theater screen and to realize that in spite of the frustrations we went through, we can begin to see some effective results of what we did. Let me just make a few comments about what was actually done with the teachers so that you have some background on this, and then make some observations about it.

We had about thirty teachers involved in the training program. The program began with three weeks of training in August before the school year opened and thereafter it was a period of two hours a week in which the teachers met as a total group and in small groups with staff as they developed ideas. It was a cafeteria approach, generally. The mental health professionals said, in effect, 'Here's what we think we have learned in the mental health field. We are not educators, and we do not know how to apply this knowledge in the classroom. That's where your expertise comes in. It's up to you to try to take what we are talking about and work out applications for it in your classroom. As you do this, we will try to provide assistance through staff and small group sessions weekly. Then we would like to be measuring what you do as well as its effect on the children.' Now that puts teachers in a very difficult position. It says, 'You are the experimental change agents. We are not providing you a blue print of what to do. At the same time, we will be measuring what you are doing.' About a third of the teachers were very active implementing these new ideas, and successful by our standards. Another third were partially successful, and about a third didn't do very much.

Another problem we built in for teachers, without realizing it, was that in our concern about invalidating the research results, we asked the principals to stay out of the rooms and give the teachers their heads. That was fine for research, but it deprived the teachers of support that they were used to and needed. They had to get most of their support instead from teams of five or six teachers (the small groups) from various parts of the city who were working together on the project.

One other comment I'd like to make relates somewhat to the charts you've seen on the screen. The teachers in filling out cumulative records in junior high and high school, tended to remark either that: 1) this is one of the easiest kids I've had to teach -- you simply present him something and he goes ahead and does it; or 2) this is one of the most difficult kids to teach, you tell him something, and all he does is ask questions. I think some of that kind of reaction is represented in the charts, in the data differences between schools.

One of our people at the Institute for Community Studies searched through twenty-five years of educational research literature, concluding that reports of changing teachers attitudes were very mixed. We did not produce any evidence that we changed the teachers attitudes. We were able to change teacher's operations. This was quite clear. After some years of joint effort, we could suggest useful procedures, and teachers could adopt these operations quickly. If we had to depend on whether we had changed attitudes, we would want to beg off.

One other comment, about research design and carrying out projects. I have participated in two rather long term projects, and many short term projects. I think we need to distinguish three major phases in any project, short or long term: 1) The development of the program itself to the point where it is specific, small, managable; and where we can develop the program to the point that we are ready to tell other people about it before we get too many people involved at the front end. We ran into most of our trouble because we were developing and implementing at the same time, and we were also measuring both teachers and kids while it was developing; 2) Program implementation; telling people about it, getting it installed as effectively as possible into some sort of a social system which has a research question, feedback to program people from the research, assistance to program people in establishing the program, 3) Evaluating outcomes and impacts on individuals, which is always the final test.

If programs are to involve changing people and institutions, I think we have to think in terms of long years. Only with long term research can we expect any real pay off. William Glasser says you have to expect three years for people to learn his program before you can begin evaluating it. In our project, I think we would say three years is probably about right to develop a program, three years to install it, and then you need another three years to evaluate it."

[It has taken more like 12, this time. WSH.]

Dr. Mary Meehan, former training consultant for the Kansas City Youth Development/School Behavior project, and now in Research and

Development with the Kansas City School District, remarked that she would like to add a fourth phase to Paul's three phase plan. 'My deep interest is in the improvement of the school district. After you evaluate, and you find some things are really good, and would improve the school experience, help in the classroom, help the teacher do a better job, how can you feed those changes and improvements into your system year after year? This is our challenge.

Most of these teachers, and all of the students are gone from our classrooms. We have a constant mobility factor. We need some means where the valuable findings of this project can be steadily fed into the ongoing operation so that the teacher who comes in new this year will have a chance to learn about it. The teacher who comes in two years from now, or the principal, needs this information, but we have not yet developed the means for doing this. We have very worthwhile findings now, and have lots of good things for teachers to do in the classroom, but we don't have the means for keeping all this going. I haven't been able to get a research grant to look into this, and I don't know that I'd be successful if I had the grant, but I would like to try.

All of you who are concerned with projects want them to be more than just a good experience while they're being developed. You want to really influence ongoing social systems. We do too. I wish you would give some thought to it, and maybe we can share our thoughts with Wynona, and come up with a working answer."

[This will come up again in the Recommendations Section. WSH.]

Dr. Will Edgerton, Deputy Director of the Division of Mental health Services, North Carolina, came to comment. "About thirty years ago, ~~he said~~, I had quite a stint of work in a state mental hospital and it was really a snake pit. While we were working there we succeeded in changing it somewhat, and at great pain. That experience led me to the point of electing to work in what I call the preventive side of health affairs. This means that I have always believed in preventive activities, and if you want to say it is a cult, so be it. I believe that prevention can take place in the sphere of emotional growth and development just as it can in other aspects of health. That means, however, that the burden of proof is on us, so I'm very much in tune with what is happening here.

I'm glad to see first of all that we have had a study that showed something. There are findings that seem to be substantial and for real. However, in the face of all those negative things we've been hearing, that people tried experimental designs out of which they got nothing "significant," it makes us wonder if everybody is out of step but Kansas City. I'm sure that makes the people in Kansas City look even more hard-nosed, and to take a more hard-nosed attitude toward the data they have than might otherwise be necessary.

I have put together a few impressions which I'm going to lay on you not in any logical order, but kind of associations I've had as I've related to what has been going on.

A very important thing, which has been emphasized somewhat already, is that the project trained teachers as teachers. It didn't try to make something else out of teachers. It is very important to have done this within the educational context. It also linked action for these teachers with detection, in the same context. They didn't go about doing a screening thing and then taking some specific action as we might as therapists. It is a good example of two organizations with different missions, with different modes of operation, different values if you like, collaborating very successfully. These are both very important integrated social systems, the health system and the educational system and its refreshing to see these two collaborate in this way successfully.

I'm tempted to tell you about some things we've been involved in along these lines, but I will just mention that the usual efforts to evaluate this kind of project don't come out looking so well. It is very very difficult to get data that will tell you you've done anything except maybe everybody has had a good time. Somehow you know that something more than having a good time must have come out of this, but here again the burden of the proof is on you.

Another important thing about this project I think and this has been mentioned too, is that the project really was excuted within the resources of personnel and time of the regular school system. And that is not to say that more than a million dollars weren't spent on this project. But in terms of the amount of time that teachers and school administrators and students put into it, I would again reiterate that I believe this would be within the reach of any school system. These are fairly easy techniques to learn.

Another aspect is that it dealt with the population group from which most of the problems come and this, again, is highly significant because people with the lowest incomes, the lowest occupational level, the least amount of education in general are the group from whom most mental disorders come. This is a large group of people, as our population surveys show, and so measures for successful intervention are going to have to be massive.

I would like to reiterate and underline what I have heard today about the difficulties in long term research, because it is so difficult to carry out long term research. I was involved myself for some years on one particular project. You get tired of it. You do. You are very fortunate if you can keep the same staff throughout the life of the project. And there are funding changes. You continually have to find funds. Methods change, and you wish you had in the beginning what develops later. I congratulate the group here on being able to persevere.

Two other things I want to mention. Maybe this is an apology for us in this field of inquiry. Maybe we haven't been using, haven't developed fully the kinds of instruments that make sense for doing evaluation. We use the best ones we have, and we create some but it may be that we don't have the appropriate ones — sensitive enough to detect whatever changes or effects result from our action.

Another aspect of this, and I certainly congratulate them on this, is suppose they had stopped after the first few years. They never would have discovered all these changes over that length of time. Its just lucky in a sense that they went far enough to see that this happened over this many years. All too frequently we give up after a certain time, whereas if we had taken it some years further, we might have found very significant changes.

Now. One question I might ask is, 'What really happened in those children?' If I were to speculate for myself about what may have happened in those children who were lucky enough to be in the experimental groups, I'd say these children had an opportunity to develop some leadership skills, to participate in the decisions that had to do with learning and the activities in the classroom. This was tested somewhat, I believe, when Paul Bowman said some teachers said these kids know what to do and so they are easy to teach. This, I suspect, gives people and these children a feeling of autonomy which they might not have had before. This certainly means the opportunity to have more options about what one does; it means flexibility in choosing those options; it means more coping skills, if you will, which must have come about as a result of this experiment. They must have developed a sense of belonging, and this is very critical to normal and healthy development for all of us. They must have had a sense of peer support, I'm quite sure, which sometimes we are not apt to emphasize when we focus on the damages and destruction of peer pressure. I suspect that was part of it. I suspect they gained some sense of significance also which they might not have gotten in an ordinary classroom. They were in small groups, and the dynamics of small groups certainly do provide this.

Another aspect, I think, of this kind of project is that it does help to make prevention activities respected. And maybe that is what I have been talking about anyhow. When the mental health center legislation was passed it mandated consultation and education programs, and sometimes people equate prevention with consultation and education. It can be so, but it may not. But this was a mandated program which had to do with things other than purely pathology. There are two main strategies for prevention, primary prevention. One is to change the environment, and the other is to change the individual in relation to that environment. Prevention in our field can't just be left to the clinicians. A lot of other people have to be involved in prevention.

end of Edg.

[Remarks paraphrased by principal investigator from notes made at Kansas University Medical School's Roots of Responsibility Workshop, September 1974. Full texts to be available in Proceedings of the workshop at a later date.]

STUDY METHODOLOGY

1. THE STUDY POPULATION

The basic data for the study were records of public school pupils collected and preserved by the Greater Kansas City Mental Health Foundation, the Institute for Community Studies and the Board of Education, Kansas City Public Schools in connection with the Kansas City School Behavior (Youth Development) Project. The current investigator became a senior associate of the Mental Health Foundation NIMH Epidemiologic Field Station in 1970, as the original grants were expiring, and received the data and permission to make further studies of the data at that time. The Foundation later relinquished its interest, and the study was continued by the investigator through this granting period at the University of Kansas Medical Center in Kansas City.

This report deals with only one segment of the total number of records compiled by earlier investigators: the records of children in the lowest (SES V) socio-economic group of the parent project, from the first experimental year.

The parent project involved one thousand four hundred pupils in its first year, and another seven hundred ten in its second, final

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Grants #MH0535, #R11 MH2303, and #MH02041.

experimental year. When we began the present study, three years of follow up work had been done on the first experimental year, and two on the second. Positive findings were emerging for one socio-economic group (SES V) from that first experimental year.

Three socio-economic strata of neighborhoods were included in the parent project. These neighborhoods were rated on the basis of data from a 1960 YMCA socio-economic status map of the area by an independent panel of judges who rated a number of relevant factors, prior to the experiment. Raters were school nurses, visiting teachers (Home School Coordinators) and members of the instructional staff. Ratings were used to match experimental and control classrooms which were the units of analysis in the early follow up. Teachers in the classrooms were not made aware of the ratings. Efforts were made to fill the top two strata of the Warner five level system of ratings, but were unsuccessful. Ns for the three strata of the first year parent project are as follows:

I. Total Number of Pupils on Class Lists for First Year YDP by SES Strata; Dr. Glick's Analysis*

SES	N	Boys	Girls
III	493	231	262
IV	416	221	195
V	495	222	273
	1404	674	730

* These are real numbers, developed from enrollment lists of participating classrooms, parent project.

A second experimental year, in which the first year control teachers became teachers in the experiment, was part of the parent YPD project. The first year control served as control for both experimental years, so the second year involves only experimental classrooms whose teachers had served as controls the year before (making them their own controls). The pupils in the experiment the second year were new 6th grade pupils. We have not followed any of this group in the current study.

Ns in the table above were later modified to exclude pupils who did not actually show up for class, or did not complete the school year, but these Ns are not shown in Dr. Glick's reports, because the classroom was his unit of analysis.

Table II: Number of Classrooms,
Entire Youth Development Project (both years)
by SES Strata and Average Class Size:
Dr. Glick's Analysis.

		Number of Class rooms (YDP)					
SES	Total N	Exper. 1. N	(Av. Size)	Exper. 2. N.	(Av. Size)	Control	(Av. Siz
III	28	6	(30.3)	11	(29.7)	11	(28.3)
IV	20	8	(28.0)	6	(28.7)	6	(32.0)
V	26	10	(27.0)	8	(26.4)	8	(26.5)

THE COHORT FOR OUR STUDY CONSISTS OF THE LOWEST SOCIO-ECONOMIC GROUP FROM THE FIRST EXPERIMENTAL YEAR OF THE PARENT YDP PROJECT.

This lowest socio-economic group was part of the population followed through three years of school after the first experimental year by Dr. Glick of Community Studies. His in-house reports (summarized as Report #1 for this grant) indicated consistent positive findings for this group at the end of the three year period. His findings were the major reason our study was begun, and the reason it is limited to the 5th socio-economic group. No consistent differences were noted between the experimental groups and their controls in the other two SES categories. (Analysis of second year experiment data had not yet approximated the time covered in the first, so we do not know what that would have developed.)

The total number of pupils in our cohort is 386.

BIAS FROM LOSS

Ten classrooms were included in the Experimental Group from SES V in the parent YDP the first year. These ten classrooms contained 247 pupils by enrollment statistics (see table preceeding). Thirty-one of these children were lost during the experimental year. No data was found for them in the years immediately following the experiment. Twenty-two children of Spanish-American and Mexican descent or identification were omitted from the Experimental Group for our analysis. Good records were available, but no Control population existed in the parent YDP data. (Race/ethnic identification was not used in the early analysis produced at the Institute for Community Studies, and as classrooms were the unit of analysis, probably could not have been). Data, and appropriate controls were available for the remaining 194.

Eight classrooms were included in the Control Group from SES V in the parent YDP the first year. These eight classrooms contained 212 participating pupils, twenty of whom were lost before the follow up years. Data are available for the remaining 192.

This loss constitutes eleven per cent of the participant population SES V, Year I Parent YDP, and less than ten per cent of the total enrolled population for this group reported in Table I. The percentage loss for the Experimental Group is thirteen per cent, and for the Control nine per cent. An additional five per cent of the participant population was omitted from the study deliberately because there was no appropriate control population for an important epidemiologic factor.

If the loss figures are computed after omitting the 22 children of Spanish-American or Mexican Descent, loss in the participant population is twelve per cent, and eleven for the enrolled population. Percentage loss for the Experimental group is fourteen per cent, and for the Control nine.

In most cases less than four children were lost per classroom. If four children had been lost per classroom, our losses would total

72, considerably more than the 51 actually missing.

A careful review of the circumstances by those familiar with the schools at the time of the first experimental year suggested no special reason for the losses. A review of the characteristics of the remaining pupils does not suggest that they are special. Dr. Glick's earlier work consistently failed to find classroom differences in the test variables. Stanford Achievement test scores from the fall of the first experimental year, SES V suggest that pupil ability was similar for the pupils lost and pupils in our cohort:

Table III: Stanford Achievement Test -
Mean Scores, Year 1 Parent YDP SES V Only,
Comparing Pupils Lost and Pupils Remaining
in Current Follow Up Cohort

	Mean Stanford Scores					
	Experiment			Control		
	$\bar{X}$	σ	N	X	σ	N
Pupils Remaining	4.7	1.2	194	4.4	1.6	192
Pupils Lost	4.4	1.4	31	4.2	1.1	20

The total cohort for the following analysis consists then of 386 school children on whom data are available: those who participated in the first year of the parent youth development project from SES V neighborhood elementary schools, minus those who were 1) lost by the first follow up year or 2) without appropriate epidemiologic controls.

SEX DISTRIBUTION

The pattern of distribution of boys and girls is shown in the following table.

Table IV: Total Cohort for Follow Up
Sixth Grade SES V Only, Year 1 Parent YDP
Percentaged for Sex Distribution ↓

	Experiment	Control	N	
Male	52%	41%	178	46%
Female	48%	59%	208	54%
	194	192	386	100%

There are eight per cent more girls (54%) than boys (46%) in the cohort. This imbalance is reflected also in the Control group, where it is larger. The direction of the imbalance is reversed in the Experimental Group, which has .04% more boys than girls.

Sex identification was available in data received from earlier investigators, and was further verified by a random check of student cumulative cards in the schools.

RACE/ETHNIC DISTRIBUTION

Racial/Ethnic differences are identified in the following Table.

Table V: Total Cohort for Follow Up
Sixth Grade, SES V Only, Year 1 Parent YDP
Percentaged for Racial/Ethnic Distribution ↓

R/E I.D.	Experiment	Control	N	
Black	79%	96%	337	87%
White	21%	04%	049	13%
	194	192	386	100%

These figures represent a difference of seventy-four per cent, which indicates that the study population is overwhelmingly black. This is true of both the Experimental group and the Control, although there is a 17% difference between the two. Our analysis, findings, and generalizing power will be largely restricted to black youth, a study of the effect of the program on inner city blacks who live in low socio-economic neighborhoods.

Some analysis will be done utilizing the non-black children, but the small sample size, especially in the Control must be kept in mind.

Racial/Ethnic identification was gathered by previous investigators. Identification of children in three categories 1) Negro,

2) Caucasian and 3) Spanish or Mexican Surname was made by clerical personnel in the public schools from personal knowledge.

SOCIO-ECONOMIC STATUS

(A comment only; methodology was described in the opening paragraphs of this chapter). The neighborhoods in the Youth Development Project were real neighborhoods, recognized by YMCA and school personnel as having functional integrity, and the schools were real neighborhood schools, of the type recommended in the Report of the Joint Commission on the Mental Health of Children and Youth, (1970). Bussing had not begun. Urban Renewal had not yet cut its way into these inner city areas. Assignment by neighborhood, circa 1960, is an on-the-average type of measure which should provide for some similarities in socio-economic background between the Experiment and the Control groups. It appears to be a useful and realistic measure for the times, and it is economical.

Based on the experience of Dr. Lee Robins, in her landmark research following only male patients from a child study clinic, our experience at the Epidemiologic Field Station in Kansas City following mental patients, and the experience of many others, the cost of developing new data on socio-economic variables at this late date seemed excessive (Robins, 1969).

The pupils in the study were no longer in the public schools in many cases, being 18 to 20 years old at the time this follow up grant was sought. It would have been necessary to find them and rely on their memories of their family incomes, occupations, etc., some eight years previously, when they were in sixth grade. We would have then had to exclude more children from our cohort as we failed to find them for interviews, or as their memories were faulty, or as they might be unwilling to disclose what information they might have had -- any for whom we could not have gotten adequate data for analysis. Dr. Robins has pointed out that tracing young women is particularly difficult, and our cohort, unlike hers, is over 50% female.

Probability of extensive losses in the study population and interview costs appear to be excessive for the dubious increase in accuracy of matching on this variable. This seems particularly true where class interactions are not at stake. Distinctions, if they could be made, would have to be made with a very fine scale. We are dealing, presumably with only one socio-economic class, and basically with one racial/ethnic group within that class.

PROBLEM BEHAVIOR DISTRIBUTION

1) Family Files

Early reports from Institute for Community Studies investigator Oren Glick suggested that the cohort followed here might contain an imbalance in problem behavior, or more properly children whose behavior had been noted in the family files of the public schools, in that he found more of these children in the Experimental classrooms than in the Control classrooms.

Early reports also make clear the admonition that no one interfere with the regular assignment of children to classrooms at the opening of the school year the year the experiment was to take place. It is not known whether someone, or several someone's, just couldn't resist the temptation to get special help for some children they felt were in need, or whether things just turned out that way, but there is an imbalance favoring the control in the number of children who have problem behavior records, in the family files prior to the experiment year.

Family file data for the period before the experiment was received from previous investigators. The data we received was collected from the Pupil Services Department of the school system. Family Files are kept for children who are considered to have problems coping with the school environment. Early data and analysis was provided in an edited version as our report #1.

Family files contain information on the following, but only if serious (i.e., official) action is taken:

Juvenile Court Referral
Child Research Council Referral
Visiting Teacher Referral
Pupil Services Referral
Home-School Coordinator Referral
Other Referral
Suspension
Special Withdrawal
Transfer to Corrective Institutions
Welfare
Truancy
Tardiness
Miscellaneous

Not all children have Family Files; only those who have in some way exhibited coping difficulties which have required official notice and action. The following table presents the imbalance noted earlier in family file data.

Table VI: Total Cohort for Follow Up
Sixth Grade Grade, SES V Only, Year 1 Parent YDP
Percentaged for Family File Distribution +
(Before the Experiment)

	Experiment	Control	N	
Family File	07%	01%	18	05%
No Family File	93%	99%	378	95%
	194	192	386	100%

The size of the difference is about 6.4%, where seven per cent is the maximum figure. The difference is important on that basis, but basically because it is our outcome criterion. If the Experimental and Control groups are not matched at the outset on the outcome criterion, care must be taken to allow for any imbalance in later analysis, and in assessing the meaning of outcome statements. Note should be taken also that the direction of the imbalance favors the control. Positive outcome will not only require less new problem behavior in the Experimental group, but working this group up out of the hole it was in at the outset.

Addition of further data collected by our staff may shed light on this imbalance. We collected complete records on the children in our cohort from the Kansas City Juvenile Court and from the Kansas City Police Department.

2) Juvenile Court Records

Juvenile Court records were examined by a member of our staff. The records are arranged alphabetically by last name in two different sections: 1) Active files, children under 17 years of age; and 2) Inactive files, children 17 and older. Each file contains a description of the child, his family, any contacts with the court or related agencies, and the outcome or disposition of these contacts. Our interest was, apart from verifying identity of the child, in the list of contacts and their disposition. This information could be gathered from the face sheet, which listed referrals, and the inside cover of the file folder upon which court orders were noted. Identification was primarily by birthdate and name, where little school data was available.

Contacts involving problem behavior were collected, and coded into categories utilized by the police department.

Part I offenses
Part II offenses
Other
Truancy
Traffic
Probations

Part I Offenses

- Burglary
- Shoplifting
- Aggravated Assult
- Larceny
- Robbery
- Auto Theft
- Armed Robbery

Part II Offenses

- Destruction of Property
- Carrying a Concealed Weapon
- Creating a Public Disturbance
- Posession of Stolen Property
- Disorderly
- Soliciting for Prostitution
- Intoxication

Other

- Parole Violation
- Juvenile Interrogation
- Incorrigible
- Complaint Investigation
- Riding in a Stolen Car

Coding for both the Juvenile Court data and the Police Data was done by a research assistant experienced in handling data on juvenile court, training school and police data, Ms. Judith Walker.

3) Police Data

Police data was entered on our class lists by police officers at headquarters. Our staff did not see the files there. We sent two class lists per week to the police captain in charge, and he returned them to us week by week until the entire cohort had been worked through his files. Dated lists of contacts and dispositions were made for each child who had a record in the police files. Identity was verified again by birthdate. Police were helpful in finding and identifying several of our cohort who had not spent much of the follow up time in school and helped cut our loss of Ss to a minimum by verifying a child's continued presence in Kansas City through his/her police record.

Again, only problem behavior was entered into our record for the analysis. One child had a record beginning shortly after birth; her father kidnapped her from the hospital. That event was not entered in our analysis.

Contacts were coded as; Part I Offenses, Part II Offenses, Other Offenses, Truancy or Traffic Contacts, as before, and entered into our analysis by school year. Summer dates were assigned on a regular basis to the appropriate school year, so that a grade year runs from September 1 to the following August 31.

4) SUMMARY: PROBLEM BEHAVIOR

When data from all these sources is considered, the magnitude of the number of children in trouble (exhibiting problem behavior) is doubled. In the following table, each child is counted only once, whether he/she has a family file, a juvenile court record, a police record or all three.

Table VII: Total Cohort for Follow Up
Sixth Grade, SES V Only, Year 1 Parent YDP
Percentaged for Evidence of Problem Behavior
Before the Experiment ↓

	Experiment	Control	N	
Evidence	11%	08%	37	10%
No Evidence	89%	92%	349	90%
	194	192	386	100%

The imbalance between the Experimental and Control groups is diminished somewhat, but the difference is still there, and still favors the Control, making the task of the program tougher than would be the case in a carefully matched experiment.

Consistent with data generally, the rate for problem behavior favors the girls in the cohort. Our data does not appear to conform in terms of racial/ethnic differences however. The rate for white children is much larger than that for blacks in the cohort (Eisner 1969).

Table VIII: Problem Behavior Prior to the Experiment
All Sources of Information
Rates Per Thousand at Risk

Males	124
Females	72
Black	80
White	204

Eisner suggests black rates are generally 1½ to 3 times as high as white rates, even in studies where data is adjusted for geographical area, age, income and family structure. It is possible that the white children in our cohort have special family structure, folkways and mores, or economic problems of which we would not be aware. If so, the test is that much tougher in their case. At the very least the labelling phenomenon described by nearly all researchers in the in the delinquency field, and made the special target of the National Strategy will have to be overcome on a larger scale in this group to show program success (Hunter, 1973).

On the whole, this imbalance in problem behavior rates makes the test for positive effect tougher, more conservative. Analyses will have to adjust appropriately for this initial difference in the two groups.

DROPPING OUT

The comparability of the Experimental group and the Control group in dropping out of school after the experimental year is also of importance. If they are not comparable on this characteristic, outcome data could be seriously biased.

One factor which might lead an investigator to test for comparability is the previously noted disbalance in sex distribution in the two groups, with males predominating in the experiment. Boys generally have higher dropout rates.

Records of all pupils were examined for evidence of dropping out.

Students were regarded as dropouts when they left the school they were attending and there was no data to indicate return to any other school, and no data showing a transfer or withdrawal to some other school or school system.

The following table presents the data on dropping out in the two study groups:

Table IX: Total Cohort for Follow Up
Sixth Grade, SES V Only, Year 1 Parent YDP
Percentaged for Evidence of Dropping Out of School
After the Experimental Year →

	Dropping Out	Staying In	N
Experimental Group	26%	74%	194
Control Group	20%	80%	192
	89	297	386

Prior Variable?

Is this difference (p=< .01) attributable to the sex imbalance mentioned above, i.e., spurious in nature? Tables IX and X present the data to test this notion.

Table X: Total Cohort for Follow Up
Sixth Grade, SES V Only, Year 1 Parent YDP
Percentaged for Evidence of Dropping Out After
the Experimental Year, by Sex →

	Dropping Out	Staying In	N
Males	30%	70%	178
Females	17%	83%	208
	89	297	386

Males in our cohort do, as expected, have a higher rate of dropping out than females ($p=<.01$). The male rate is approximately 300 per thousand at risk, and the female rate 170.

Table XI: Total Cohort for Follow Up
Sixth Grade, SES V Only, Year 1 Parent YDP
Percentaged for Evidence of Dropping Out
Partialled to Control for Sex Distribution
and Differential Dropout Rate →

Males Only

	Dropping Out	Staying In	N
Experiment	33%	67%	101
Control	26%	74%	77
	53	125	178

Experiment Rate = 326

Control Rate = 260

$p>.05$

Females Only

	Dropping Out	Staying In	N
Experiment	20%	80%	93
Control	15%	85%	115
	36	172	208

Experimental Rate = 204

Control Rate = 147

$p>.05$

By this line of reasoning, since the apparent association between the Experimental condition and Dropping Out disappears from statistical significance in both portions of the table, we accepted the null hypothesis and regarded the Experimental group and Control group as comparable. The original difference, noted in Table VIII, appears to be primarily a spurious difference, largely a function of the higher dropout rate for males and the maldistribution of males in the two groups.

Intervening Variable

There is, however, some continuing evidence in the data that rates for dropping out may be somewhat greater in the Experimental group. Could this small difference rest on intervening variable such as schools attended after the experimental year? Perhaps there are different dropout rates in different junior and senior high schools. If this is the case, and Experimental and Control group children do attend these schools differentially, later school may specify a condition under which the rates are higher or lower for the two groups.

Analysis revealed that 70% of the children in the study went to either Lincoln Junior High and High School, or Central Junior and High School. The remaining children went in small numbers to a variety of other schools in the district. Tests of association with variables of interest led us to classify these other schools with

Central as a single group of non-Lincoln schools. Consequently, all school data is presented in this collapsed format.

For instance, tests of statistical significance for the association between the Experimental/Control condition and Juvenile Court records of problem behavior reach the .01 level of statistical significance for tables separating children by later school attended. In these tests the Control was high at Central High School, Manual High School, Northeast High School and Westport High School. The Experimental group was high at Lincoln High School only. Ns are small when the study population is broken up into specific school categories. We felt that economy of expression, clarity of presentation, and the value of conservative testing was achieved best by combining the data.

No structural reason is apparent for the paths these students took to later schools. As far as the school system is con-erned, students from the elementary schools in our study are as likely to attend Lincoln as Central. There is no official pattern.

Table XII: Total Cohort for Follow Up

Sixth Grade, SES V Only, Year 1 Parent YDP

Percentaged for Evidence of Attendance at Different

Schools After the Experimental Year +

	Lincoln	Other	N
Experiment	14%	86%	194
Control	47%	53%	192
	118	268	386

p=<.01

As shown in Table XI, children in the Experimental and Control groups did not attend Lincoln, or Other schools in equal proportions. The Control group was more prominent at Lincoln, and the Experimental in the other schools. Of course by this time in the follow up, no one at the schools would have known who they were. No records were kept, and thereby none were sent along with them. The children were now three grade years separated from the experimental year classroom and with a whole new group of teachers and administrators.

Table XIII: Total Cohort for Follow Up Sixth Grade, SES V Only, Year 1 Parent YDP Percentaged for Evidence of Dropping Out at Later Schools →

	Dropping Out	Staying In	N
Lincoln	18%	82%	118
Other	25%	75%	268
	89	297	386

p=<.01

The dropout rate at Lincoln is 178, and the rate at Other schools 253.

Table XIV: Total Cohort for Follow Up Sixth Grade, SES V Only, Year I Parent YDP Percentaged for Evidence of Dropping Out, Partialled to Control for Distribution in Later Schools and Differential Dropout Rate →

Lincoln Only

	Dropped Out	Stayed In	N
Experiment	25%	75%	28
Control	16%	84%	90
	21	97	118

p=<.01

The Dropout Rate for the Experiment is 250, and for the Control 155, suggesting that something is happening with the Experimental group children who went on to Lincoln, more than with the Controls.

Other Schools

	Dropped Out	Stayed In	N
Experiment	23%	77%	166
Control	28%	72%	102
	68	200	268

p=>.05

Dropout rates for the Experiment and the Control at Other schools are 234 and 284 respectively.

Tests for partial associations in Table XII suggest a condition (attendance at Lincoln Schools) which affects the association between the experiment and dropping out. It should be noted that Experimental Group children dropped out more than their Controls when they attended Lincoln, but not if they went on to schools other than Lincoln. The rate for the Experiment at Lincoln is higher, while it is approximately the same as that for the Control when children are attending other schools.

Further inspection of the data suggests that it is possible that dropout rates for males are lower at Lincoln than at other schools, exclusive of experimental control conditions, while females rates vary by experimental-control condition differentially by school attended.

	Dropout Rates for Males	For Females
Experiment, Lincoln	240	250
Control, Lincoln	230	90
Experiment, Not Lincoln	350	170
Control, Not Lincoln	370	300

Both males and females have highest rates at Other schools, if they are in the Control Group. Males in the Experiment also have a higher rate at Other schools, but females in the Experiment have their highest rate at Lincoln.

SUMMARY: DROPPING OUT

Such differences as were noted in our first dropout table, Table VIII, were regarded as primarily an effect of the association of this variable with sex and the sex disbalance noted previously between the experimental group and the control group. A possible secondary effect from the schools children attended after the experiment was also noted.

The two groups, experimental and control were regarded as sufficiently comparable for further study.

Based on this experience with the data and the advice of our consultants decision was made to handle the data in further analyses in six study groups.

2. THE SIX STUDY GROUPS

Once we were satisfied that the Control group and Experimental group were sufficiently comparable for analysis, we divided the study population into six study groups to control major sources of bias for further comparisons.

The study population was divided into groups which were homogeneous for sex, race or ethnic identification and schools attended after the experimental year. This division resulted in six groups:

1. White Males, who went on to Other schools from the experimental year, labelled WMO.
2. Black Males, who went on to Other Schools from the experimental year, labelled BMO.
3. White Females, who went on to Other Schools from the experimental year, labelled WFO.
4. Black Females, who went on to Other Schools from the experimental year, labelled BFO.
5. Black Males, who went on to Lincoln from the experimental year, labelled BML.
6. Black Females, who went on to Lincoln from the experimental year, labelled BFL.

These groups were subdivided by the Experimental and Control condition to then produce six comparison or study groups for the analysis as follows:

1.	WMO Ex	N=16
	WMO C	4

2.	BMO Ex	70
	BMO C	74
3.	WFO Ex	25
	WFO C	44
4.	BFO Ex	55
	BFO C	50
5.	BML Ex	14
	BML C	30
6.	BFL Ex	14
	BFL C	60

It should be noted that there are no white study groups for Lincoln School. None of the white children in the study attended Lincoln, so our comparisons there are for black children only.

Devising study groups in this manner should control for the effects or bias of variables which are not associated with the experimental/control condition equally -- sex, race or ethnic identification and school environment during the follow up.

3. DATA COLLECTION

Our cohort then consists of the entire first year SES V population from the parent YDP including both experimental and control classrooms of children. The cohort is limited to those children who actually participated in the program. Pupils who were not present for the initial testing at the beginning of the program are not included, even if they were present for class later. Only those children for whom we have records for the full period are included.

RECORDS FROM EARLIER INVESTIGATORS

Records received from earlier investigators included:

- name of pupil
- classroom in experimental year
- Stanford Achievement test scores from experimental year
- birth date
- sex
- race/ethnic group identification
- teacher ratings for seventh, eighth, and ninth grade years, public schools
- school absences for seventh, eighth and ninth grade years
- school family file data for K-9 inclusive
- master list of pupils in the parent YDP by original classroom, Experiment and Controls.

ASSEMBLING THE STUDY POPULATION LIST

Our first task was to re-locate the pupils in the cohort. We used the Master List for SES V Year 1 of the parent YDP.

Pupils on the list were checked for participation in the initial testing at the beginning of the program, and for participation in the school year the experiment took place in the classroom of record.

Pupils were not retained for the study population if both criteria were not met.

Pupils were then coded for racial/ethnic identification, as noted in the section devoted to Racial/Ethnic distribution earlier in this chapter. Children of Mexican-American or Spanish-American descent were excluded for the study population because all 22 were in the Master List.

The list of pupils resulting from this effort was submitted to the Board of Education, Kansas City Missouri Schools for identification. A run through their computers identified children currently in school and located them in the proper school. This permitted us to go to the high school and search out the child's current record. This list is referred to in our documents as List Found in School. The Board of Education also furnished us with a computer list of children not found in the school system. We searched for these children in the schools ourselves, and in juvenile court, police and mental health center files.

Data was needed to complete the school records for two more years and to construct records for contacts with the juvenile court police department and mental health centers.

DATA FROM CUMULATIVE RECORD CARDS

A search was instituted for the Cumulative Record Cards of pupils in our cohort. These cards contain record of absences and of teacher ratings, and are located in the school currently attended by the child.

List of names not found in the school system.

This list was also a print-out from the School Board. It contained the student number and original classroom number. The numbers were matched with those from the original classroom lists to obtain names.

If there was some original information on the child, the school which was last noted was used as the place to begin looking for the record. From that point the yellow transfer cards, which are filed alphabetically with the cum cards, were used to trace the movement. If, however, there was no information given for the 63-64 year and a further loss of information during the 65-66 year, no follow up was done. In a few cases, there was family file information but no original cum card information. When this occurred we tried tracking down the complete cum card.

We checked through the original cum cards and if a hole was found in the Personal Ratings during the original study this was picked up during the follow up.

One group which presented a problem was the students who had attended West Junior High. We consulted with Dr. Clyde Baer, of the Board of Education as to the most likely high school these children would attend. Since they were listed on the "not found in school" list, we were not expecting to find many of them. Dr. Baer had a breakdown of a group of 84 students who had attended West Junior High. The following list shows the disbursement of these 84 students:

Manual	9
Northeast	18
Westport	23
Other	2
Out of District	24
Not located	8
	84

From this example we saw that slightly more than one-half of the students went to Westport, Manual, or Northeast and most of the remaining group transferred out of the district or were not located. We concluded that it would be worthwhile to check our list of West Junior High students against the Westport, Manual, Northeast, and Archives files. If they were not located in one of those places we did not try to track them down any farther.

Teacher Ratings

Teacher ratings are the evaluative numerical statements classroom teachers record on report cards in the Kansas City School District which reflect the teachers judgment about the pupil in four work categories: 1) work habits, 2) responsibility, 3) self-control, and 4) getting along with others. Each teacher rates each pupil from on a scale of five for each category. There may be more than one teacher rating the pupil each year. We recorded the mean rating, standard deviation and the number of raters for each work category for each pupil for each year. These ratings are a normal part of each child's school record. Methods replicated those of earlier investigators, and completed some records which they had not been able to complete.

Absences

Absences by school year are also recorded on the Cum Card. Absences are recorded as "days absent." If absence record was not complete for a given school year, the data was not included in our study. Only data for complete years was used. Absences were collected into weeks absent for our analysis, or expressed as average weeks absent.

Data collection methods replicated those of earlier investigators adding to records received from them.

OTHER VARIABLES

The Family Files

Methods used in gathering data from the Family Files have been discussed at some length in the previous section devoted to that data as a prior condition of our population. Both lists (found and not found) of students were checked in the files. Forms for collecting the data were devised and were used in the data collection. Care was taken to represent an incident of problem behavior only once. Family Files were arranged alphabetically at a central office.

Juvenile Court Records and Police Data

Please refer to earlier section dealing with this information.

Mental Health Center Data

Both lists were also run through the card file of the Western Missouri Mental Health Center. Western Missouri is the current form of the Psychiatric Receiving Center developed by the Greater Kansas City Mental Health Foundation and operated under contract with the City of Kansas City, Missouri, as a comprehensive community mental health center. Its catchement area includes the neighborhoods represented in our study. The facility has become the facility for the western third of Missouri, in a state operated system of mental health services. It was thus regarded as the most likely (and only public) center for mental health services for our study population.

The card file at Western Missouri is an alphabetical file of people who have been seen on any of the services. The card gives dates of visits or stays and type of service given. Patients are identified by name, birthdate and address.

We have not included mental health center data as evidence of problem behavior, where problem behavior has been reported as a phenomenon combining school, police and juvenile court problem records. These last three sources of information are frequently utilized in discussions of juvenile delinquency. Contact with mental health services generally is omitted from that list. Our experience with the referral of children to Western Missouri is that where it is a result of school behavior problems, it appears in those records. Not enough is known about the nature of the complaint to assign other contacts to this category. Data will be presented separately in the Findings section.

Grade Year

All data was organized by grade year, defined as a calendar year from September 1 to August 31 inclusive. After preliminary analysis, this variable was selected as the time statement, representing both the distance between the experimental year and the year the outcome measure represents, whether the child was in school, in school but out of phase, or in school and tracking. In this manner, attention can be focussed on approximate age of the child, and time elapsed since the experiment, which is thereby kept constant in the comparisons.

THE NEW MASTER LIST

Finally a new Master List was constructed alphabetically, containing all the children in our study population, with identifying data for cross referencing to student records and original classroom in the experimental year, experimental group and control. No child was included who 1) did not participate in initial testing, 2) did not complete the experimental year in the original classroom, 3) did not have at least two years of school data available and 4) could not be placed in the city for the period of the follow up.

Students were coded by student number, by original classroom, and by identifying numbers to permit cross-referencing data gathered by previous investigators who used another system of numbers. Coding instructions were developed for all data, and data coded for IBM card punching. Cards were made and corrected for errors in coding or punching. Computer print outs were utilized in data analysis. Code, and card format attached.

Raw data is stored under lock and key under the personal supervision of the investigator. Records have been kept in such a way as to permit any future investigators to build on our work.

A statement should be made recognizing the professionalism of previous investigators, which we have had many opportunities to appreciate. Records have been kept intact and were made intelligibly at the outset. Our follow up would have been impossible otherwise. Relationships with the schools etc., have been built carefully and well. We have had the benefit of this early work, and trust we have continued in a similarly responsible manner.

SUMMARY: DATA COLLECTION

A cohort of three hundred eighty-six children was identified from the SES V, Year 1 parent YDP project for follow up. This study population, or population at risk, consists of children who participated in an experimental sixth grade year in the Kansas City public schools, and their controls from that project. Demographic data, and data for a three year follow up in the public schools was received from previous investigators. Replicating data for two more years of school follow up, and adding data for police, juvenile court, and mental health center services comprised the new data collected by this investigator and staff. Old records were verified, and in some instances completed for the first follow up period, as well.

Variables of interest are:

- experimental/control condition
- sex identification
- race/ethnic identification
- outcome measures
  - grade year
  - dropping out
  - problem behavior
    - family file entries
    - juvenile court entries
    - police contacts
  - school absences
  - teacher ratings
  - mental health services

4. TECHNIQUES OF STATISTICAL ANALYSIS: STRATEGIES

Background

Early analyses from the Institute for Community Studies dealth with the classroom as the unit of analysis, following the parent YDP study design. We chose the child as the appropriate unit of analysis, particularly because the original classrooms were not functional units after the experimental year; children scattered in a seemingly random manner to a variety of junior highs and high schools. No class room group stayed intact in the follow up years. Our analysis of the comparability of the experimental and control groups indicated that later classroom or school experience and environment might have important effects on outcome. Race also looked important. This decision was made at the Mental Health Foundation Epidemiologic Field Station, but our biostatistical consultants agreed when they came into the project after it was moved to the KU Medical Center.

Finally, after consultation with our longitudinal study consultant, Dr. Philip Enterline, we settled on two concurrent procedures.

1. Selection of a standard population or super control consisting of the pooled experimental and control groups; i.e., the standard or expected frequency is that of the average of the groups, which Dr. Enterline felt was the most conservative test.
2. Selection of the control group as the standard for the population at risk, against which the experiment should be measured, which was regarded by our Biometry department faculty as the usual and proper process.
3. Application of X specific rates to this (these) standard (s).
4. The Mantel-Hentzel goodness of fit, chi-square suvirvorship test introduces the time variable

for the longitudinal analysis, selected for this function by Dr. Enterline.

5. Statistical signficances between the experimental and control (non-combined) groups were determined by the use of an adaptation of chi-squared tests designed by Pearson to determine significance between age-adjusted death rates.

We felt that while the pooled standard proposed by Dr. Enterline was more conservative, the use of the control alone for this purpose was sufficiently common that we should show it as well. Use of the control alone will give other investigators, who might be unfamiliar with the pooled standard, a better feel for the size of the outcome figures, since it will be more in line with their experience. Tables etc., are clearly marked as to the base used.

Wherever possible and practical, both methods are utilized in this report.

Strategy of Analysis

A. Definition of the Problem (Reprise)

The Kansas City School Behavior Project was intended to devise and test the effectiveness of a program of action for the treatment of mild behavioral disturbances in children in the school setting. The program was expected to prevent, to some extent, severe behavioral disturbances among these children in the adolescent years, and to have an effect on behavior in the total community as well as in the school setting. The design was executed within the resources of personnel and time budget of the regular school system. The project was intended to be a pilot demonstration — a model for other schools and communities.

Early follow up of the pupils in the project indicated that there might be positive results three years after the experiment took place. This pattern of differences was observed in referrals, suspensions, absence rates and teacher ratings. After six years of extensive effort, the pay-off appeared to be emerging from the mountain of data that had been gathered. We had to know if it was dependable, and whether it could be broadened to behavior outside the school system. We felt we had to know what the conditions were under which it worked or failed to work.

B. Plan for Analysis and Evaluation

1. If the apparent prevention effect noted in the ninth grade year data can be shown to persist into the two following school years; and,
2. If this apparent prevention effect can be buttressed with data from outside the school system, giving it both greater credence and value; and,

3. If epidemiologic conditions can be specified under which the effect is valid, invalid or more or less pronounced; then,

4. We can reasonably make recommendations for the design of future intervention efforts consistent with our findings and our understanding of the relationships among the important factors delimited in our analysis.

Our attempt to answer these questions took this form:

C. Data Collection

1. Absence rates, teacher ratings.

   Family File entries for two further school years extending the time of the school follow up to five years, or the eleventh grade year.

2. Police records, Juvenile Court records and Mental Health Center records for the entire life of each child in the study up to an including the eleventh grade year.

Many other indicators might be used. Our concern was that:

1. We duplicate the earlier data on a longer time line.
2. We utilize real life variables -- records which are kept as an ordinary process (and not conjured up for our benefit) and are consequential in the lives of children in a community.

D. Methodology

1. In order to provide the most conservative answer to these questions we have engaged in the following procedure:
    - a) assume the null hypothesis;
    - b) pool the experimental and control group frequencies to arrive at expected frequencies; and,
    - c) compared the experimental condition with the (pooled) expected frequencies.
    - d) a standard experimental/control comparison characteristic by characteristic.
    - e) compared each race X sex X school group (each of the six study groups) on each variable and graph the longitudinal changes.

2. The two groups are comparable -- the differences noted in the charts should not be attributed to:
    - a) Loss in follow up
        1. loss rate well within acceptable limits — less than 10% over five years.
        2. Review of characteristics of remaining pupils does not suggest losses were any special group.
    - b) Dropping Out

      No statistically sig diff E/C
    - c) Social and Economic Factors
        1. Neighborhoods well matched
        2. All children in one socio-economic class, no bussing etc.
        3. Stanford Binet Scores

           $\bar{X}$ within .3 -- no big difference

4. Behavior problem rates prior to sixth grade experience if anything favor control.

A final analysis "Were Children in Trouble Helped?" was added to deal with one of the goals of the parent YDP: to help children already in trouble, as an alternative to expensive 1.1 therapy. In this analysis, the experiment and control groups have not been pooled to establish expected frequencies. A standard experiment/control design was employed.

FINDINGS

The Teacher Ratings

The teachers rating is a combined score (summed) developed from numerical scores teachers give pupils on work habits, getting along with others, responsibility and self-control. Each characteristic may be rated from 1-5, so 20 would be a perfect score. Ratings may be made by more than one teacher each year, and sometimes as many as four or five teachers. Means of ratings for each of the four characteristics were summed to produce a combined score for each child for each grade year.

Data begin with the seventh grade year, immediately after the experiment and continue through the eleventh grade year. Most of the children were in schools other than the elementary schools where they were in the experiment by this time. Ratings should not be affected by awareness by teachers that children had or had not been in the experimental or control groups. No entries were made in the children's records, and there is little communication from school to school.

An inspection of the chart which follows indicates that if we had only seventh grade year and eleventh grade year data we might conclude a positive effect. However, the longitudinal view does not support this conclusion, for the tenth grade year.

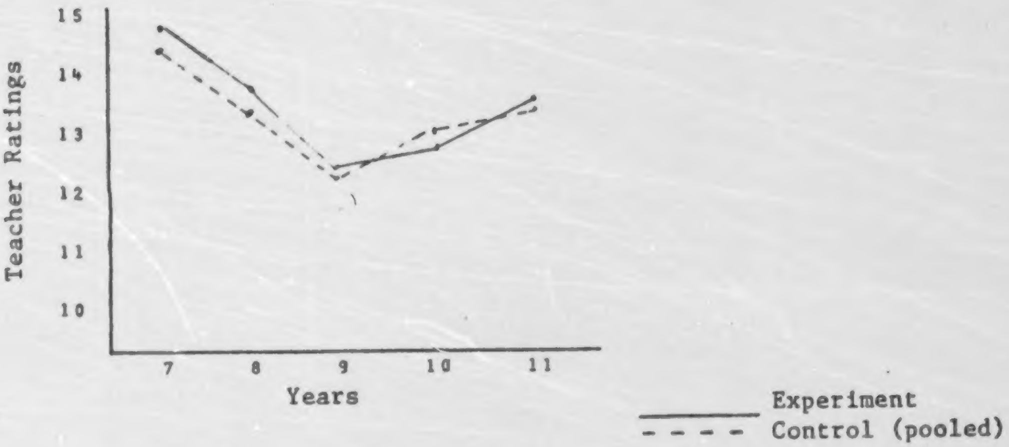
Figure 1A presents the data for the experimental group against the pooled standard for the population at risk. Figure 1B presents the same experimental data against the simple control standard.

TEACHER RATINGS

TOTAL SCHOOLS

EXPERIMENTAL VS. S CONTROL

Figure 1A

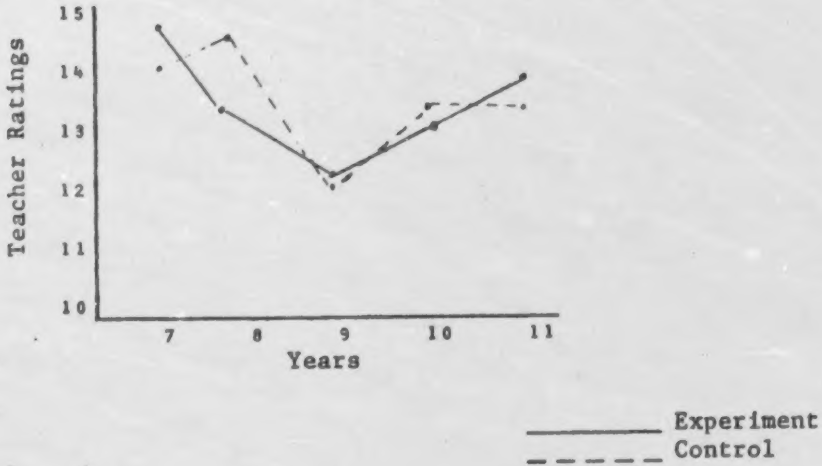


TEACHER RATINGS

TOTAL SCHOOLS

EXPERIMENTAL VS. CONTROL

Figure 1B



Both graphs show the Experimental group with higher ratings immediately after the experimental intervention in sixth grade.

Both graphs show the experiment slightly better off at the ninth grade year and the final year of the follow up.

Breaking the data down by schools attended after the sixth grade produces much learer pictures, and an explanation of what was producing the relatively flat effect, or lack of effect in the tables comparing only the experimental and control condition. These graphs show a rather noticeable effect.

Figure 2A shows the data with the pooled standard, and Figure 2B the data with the regular control. Both figures show that teacher ratings are consistently higher for the experimental group at Other Schools, and lower at Lincoln. Size of the difference between experimental and control group ratings is smaller for the pooled control, as we expected, but both graphs are clear about the direction of the differences. The solid line is consistently above the other in one set of schools and consistently below at Lincoln.

TEACHER RATINGS
OTHER SCHOOLS
EXPERIMENTAL VS. CONTROL

Figure 2A
Other Schools

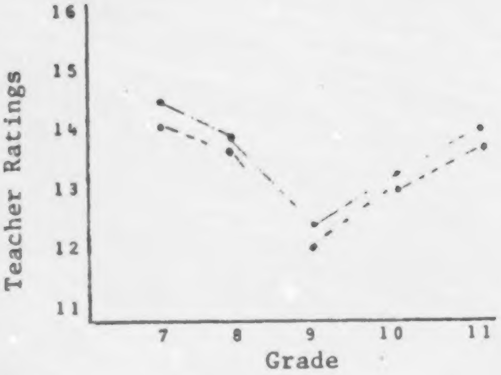


Figure 2B
Other Schools

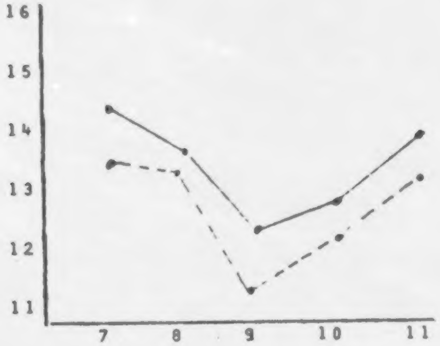


Figure 2A
Lincoln School

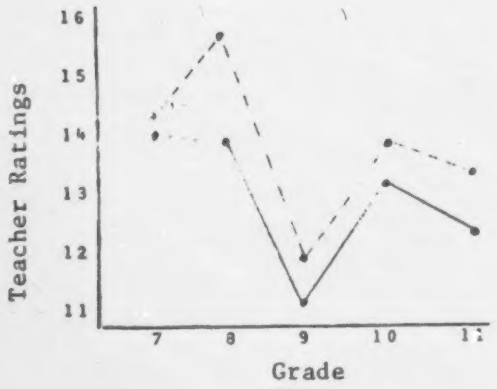
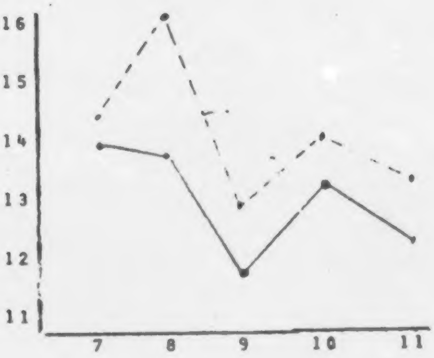


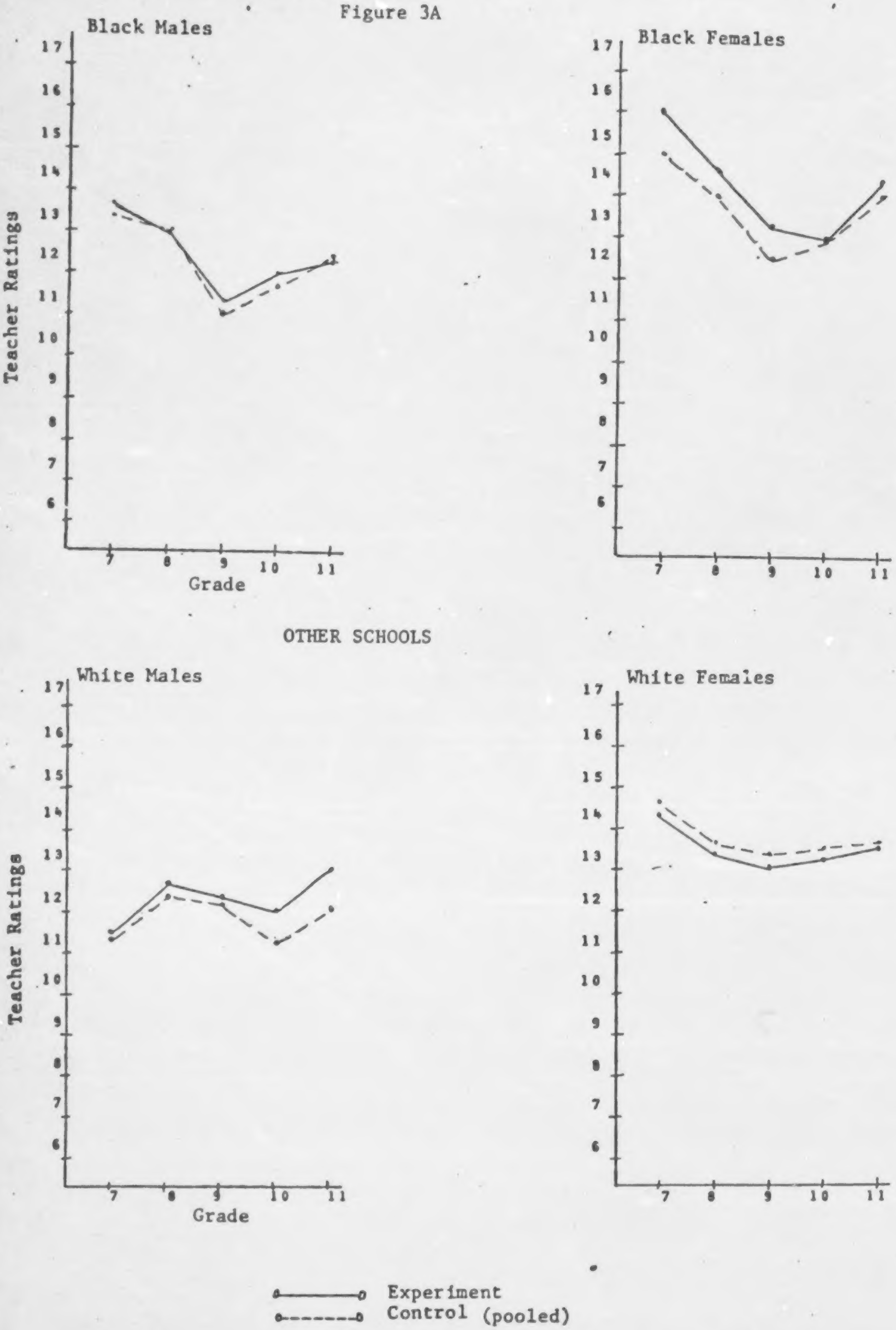
Figure 2B
Lincoln School



——— Experimental
– – – Control (pooled)

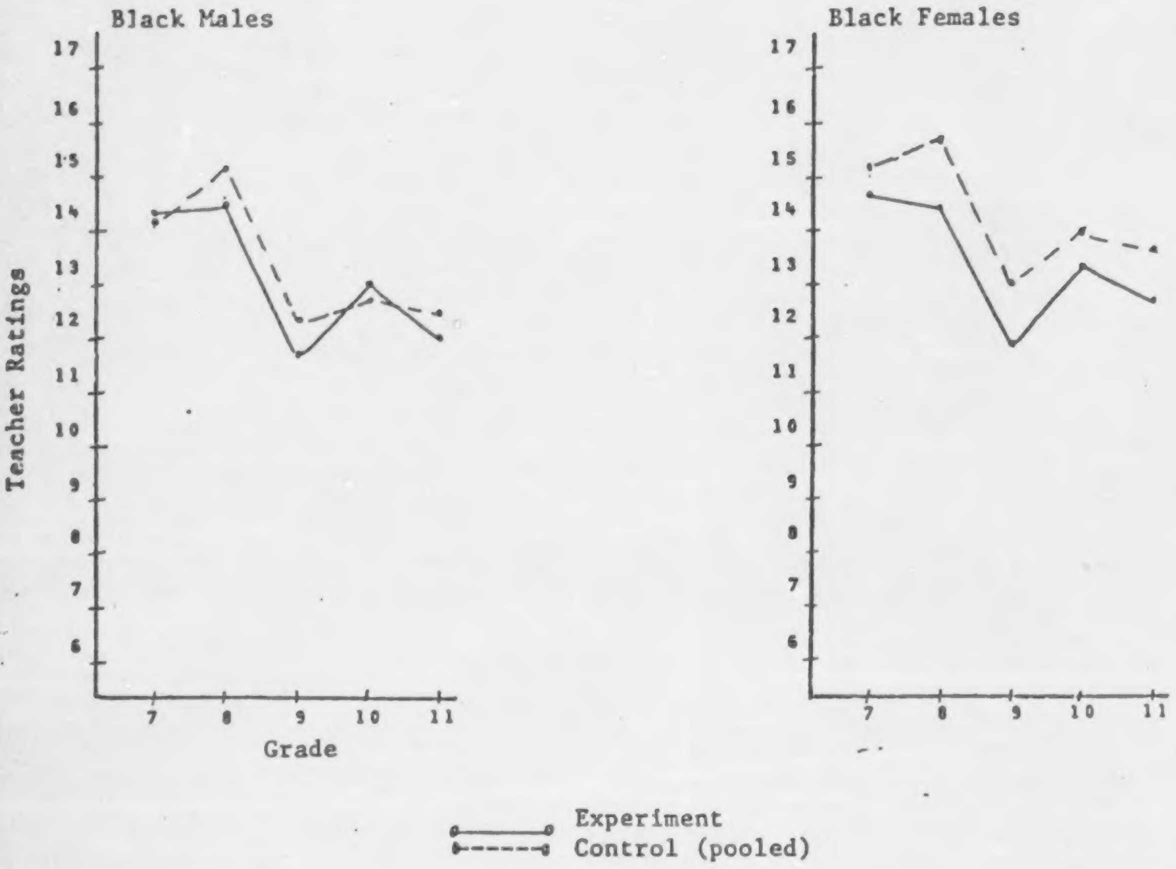
——— Experimental
– – – Control

Figure 3A

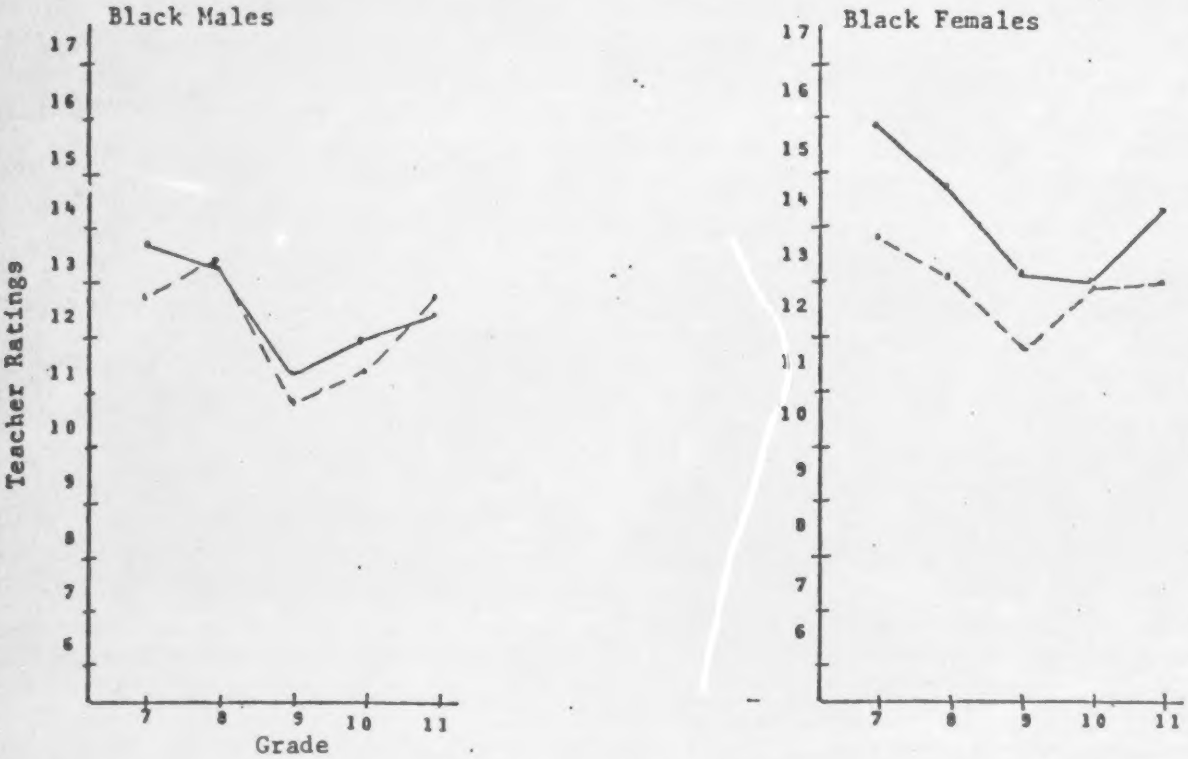

Black Males
Black Females
White Males
White Females
OTHER SCHOOLS
Teacher Ratings
Grade
17
16
15
14
13
12
11
10
9
8
7
6
7
8
9
10
11
Experiment
Control (pooled)

LINCOLN SCHOOL

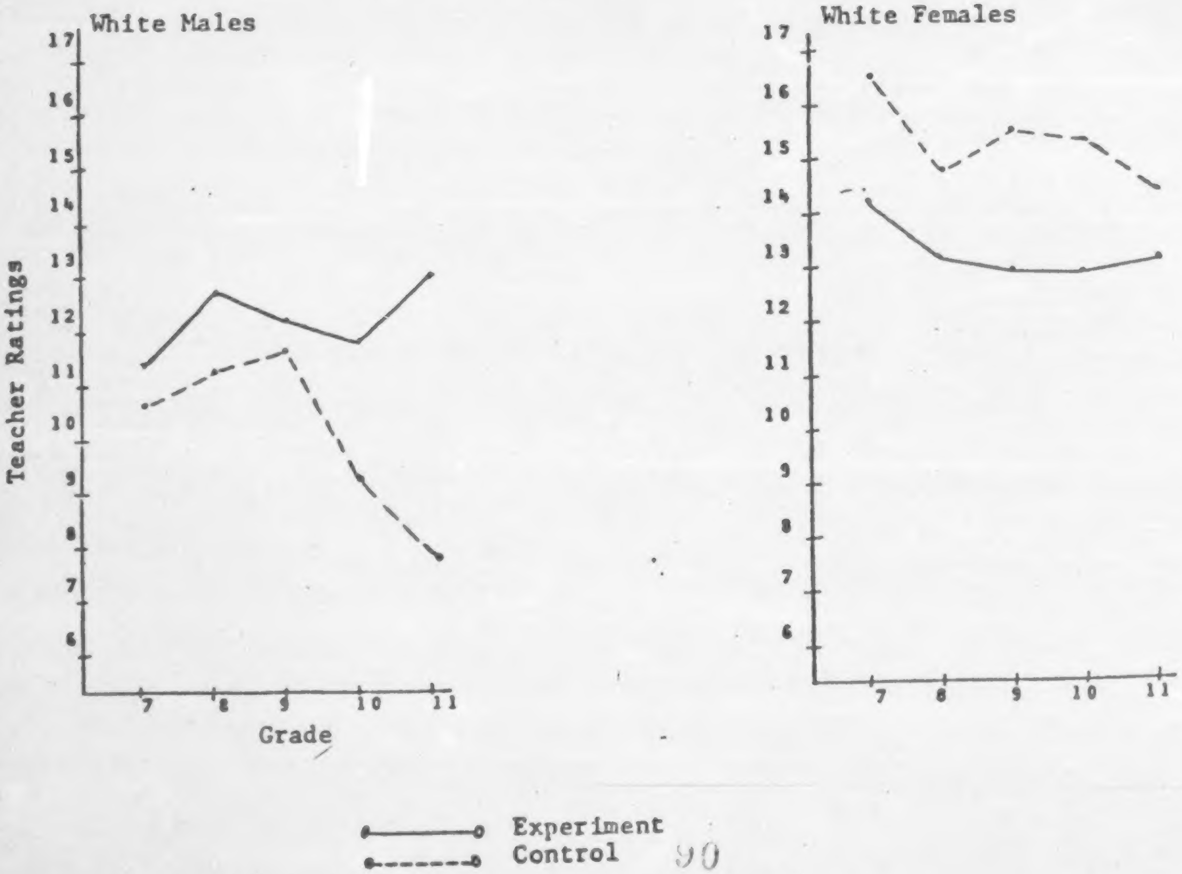
Figure 3A (cont.)



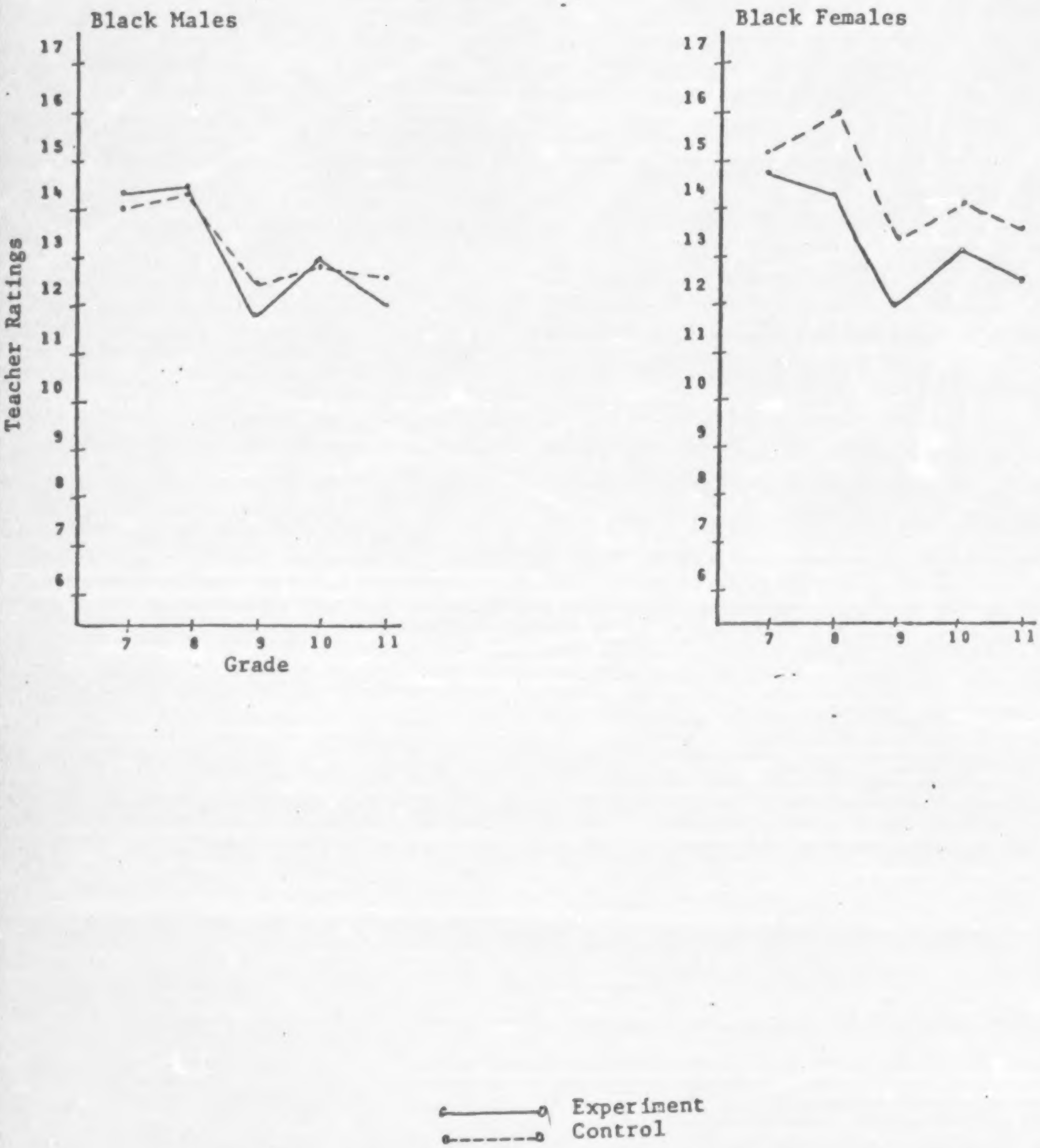
OTHER SCHOOLS Figure 3B



OTHER SCHOOLS



LINCOLN SCHOOL Figure 3B (cont.)



It appears possible that something in the environments at Lincoln and at Other Schools is related to teacher ratings. Something which works with the experiment at the Other Schools, and something which works against it at Lincoln.

These findings might be even more marked in this difference if White Females at Other Schools had not been rated consistently lower when they had been part of the experiment than when they had been in the Control. One can't help but be curious about what was happening.

Findings for each of our six study groups are presented in Figures 3A and 3B. Figure 3A presents data compared to the pooled standard, and 3B the regular control.

Inspection of the study group graphs suggests the finding of positive effect for the Experimental group at Other Schools is largely a result of positive effect for Black Females and White Males at Other Schools. Black Males have generally higher ratings also, but this effect has disappeared and reversed at the eleventh grade year. Reenforcement is probably in order at the tenth grade for many of these pupils, both Female and Male.

As was the case in comparing Figure 2A and Figure 2B, the pooled standard gives a more conservative, but not a different picture of the results.

On the whole then, we find positive effect for three of our four study groups who went on to other schools, and negative effects for pupils who went on to Lincoln School. This specifies an epidemiologic condition under which the experiment tends to work or not work -- the school environment in the years following the experiment. Data also shows clearly how a positive result in one environment may cancel or be cancelled by a negative result in another, in the over-all assessment of a program. Or results in peculiar findings if only one environment is tested? We were fortunate that our study population attended several different schools, and that the environments apparently differed in ways important to the success of this project.

At this point we have shown data on one dimension, teacher ratings, which shows that the prevention effect is present, and persists into the tenth and eleventh grade years, and that it may be conditional to appropriate later school environments. The effect is linked to the experimental year in that it begins the following, or seventh grade year. There is no gap in the time order.

The Absence Data

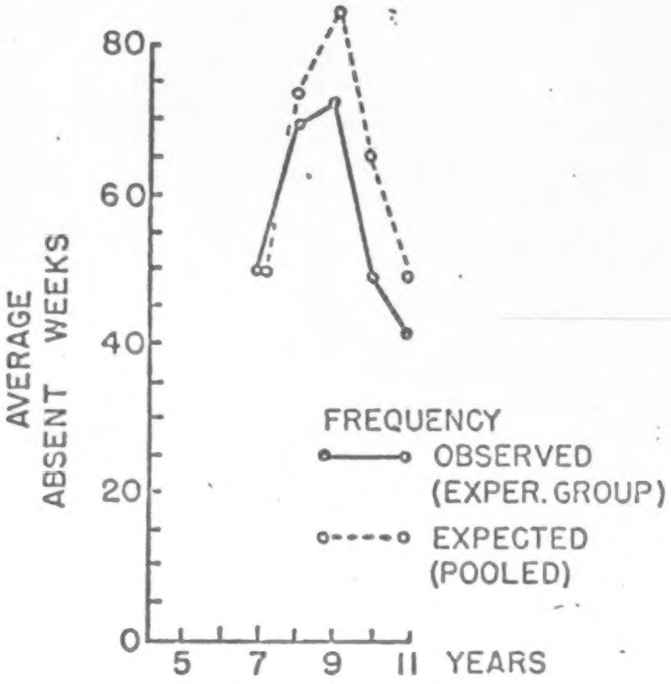
Absence data has been converted from days absent, to average number of absent weeks for comparative purposes. Data begin with the seventh grade year immediately after the experiment, and continue through the eleventh grade year. In the work of earlier investigators, and in the parent project design, absences were regarded as at least partially a reflection of dissatisfaction with school, failure to accept a steady school role, and generally a failure to work out a positive coping strategy for an important segment of a child's life. We have accepted that definition in regards to absences as problem behavior. One might also note that the schools define absences as problem behavior, imposing sanctions in cases of excessive or unexcused absences.

An inspection of the chart which follows indicates that while Experimental and Control group absences are about the same in the year immediately after the intervention year, by eighth grade a definite pattern has begun with Experimental group absences lower than the pooled control. These differences are statistically significant for grade years nine and ten (Figure 4).

Differences increase in size, but the pattern remains the same when the simple control is utilized in the chart in Figure 5.

When absences are compared in our six study groups, Figure 6A, using the pooled control, it is clear that most of the effect noted in

FIGURE 4



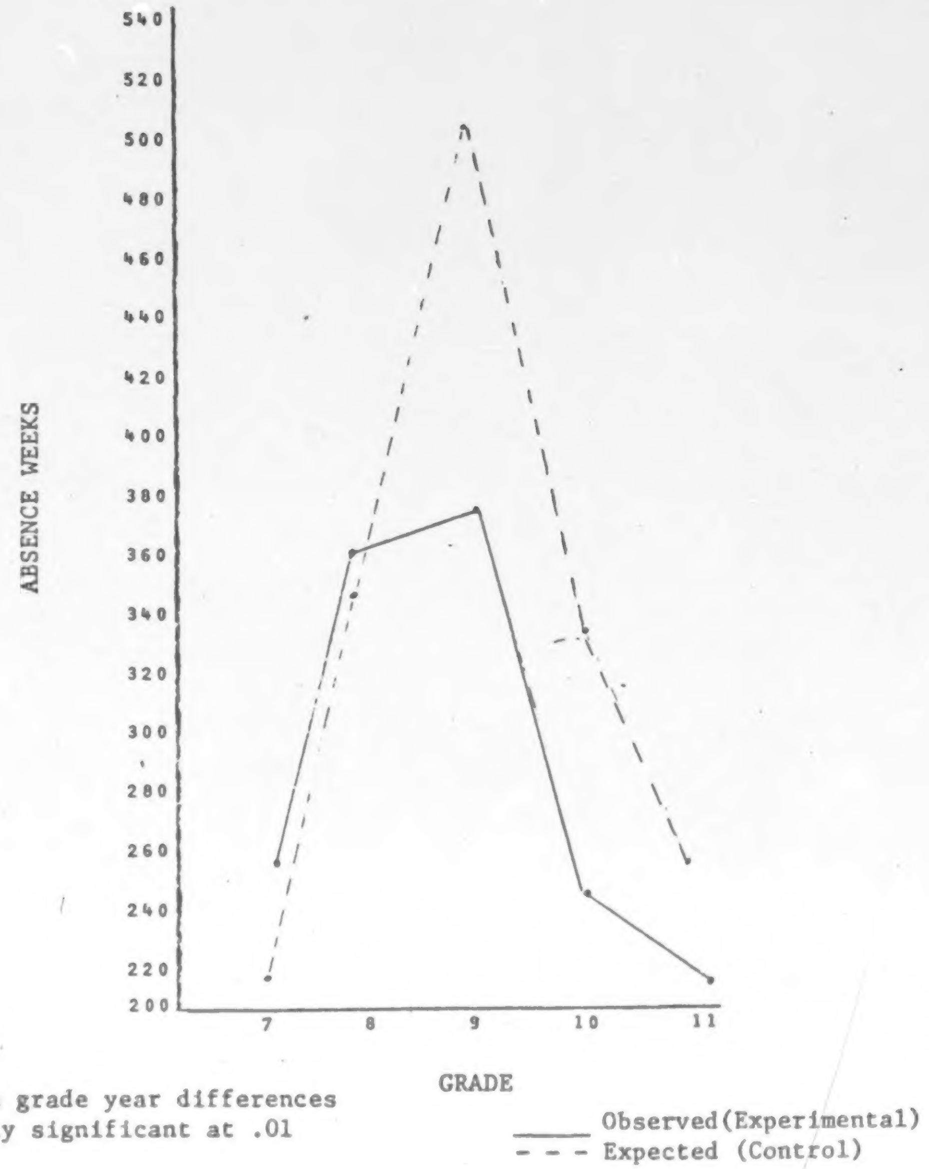
ABSENCE DATA

9th, 10th YEAR DIFFERENCES
STAT. SIG., AT .05 LEVEL

FIGURE 5

ABSENCE DATA

OVERALL



9th and 10th grade year differences statistically significant at .01 level.

FIGURE 6A

ABSENCES

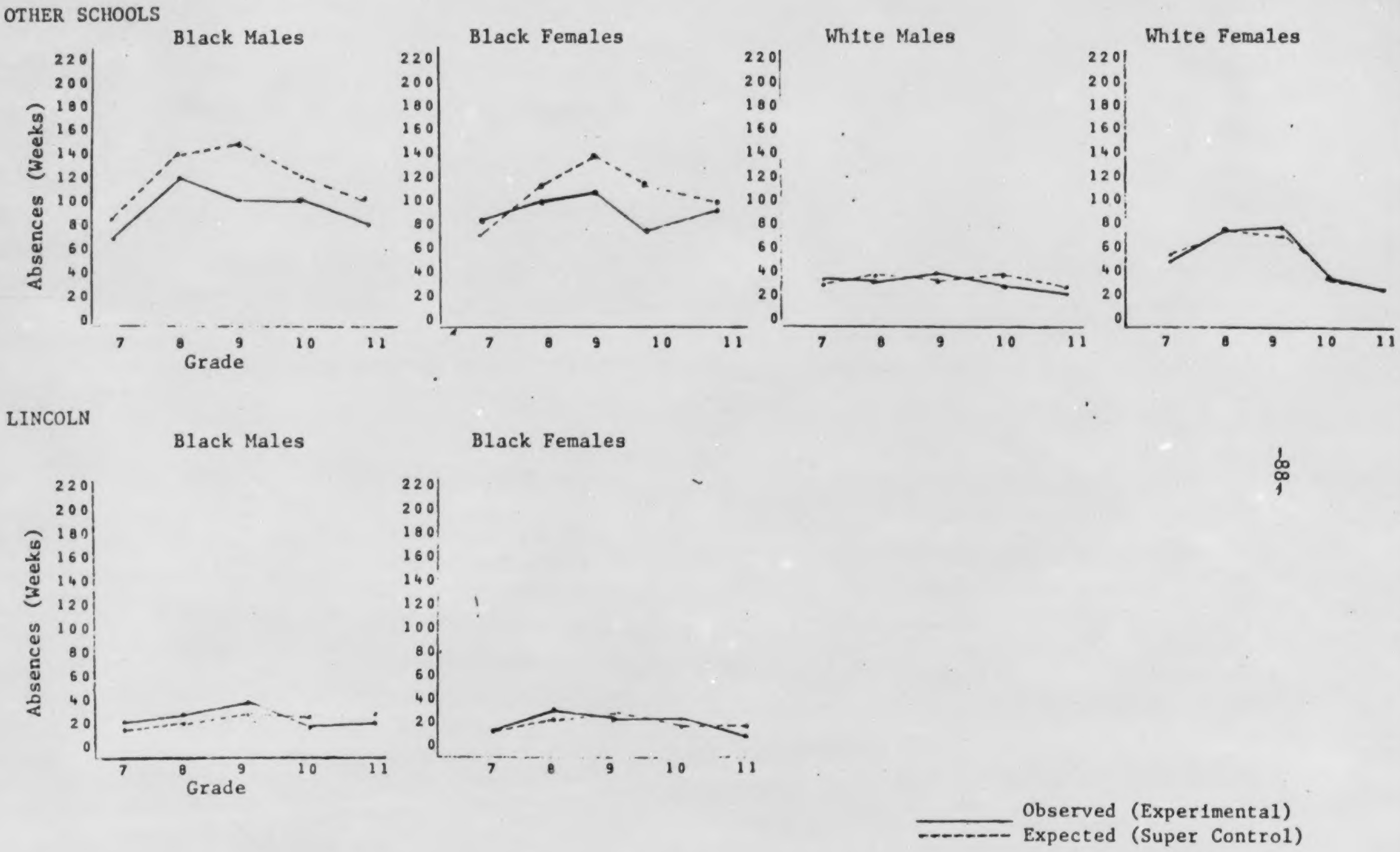


FIGURE 6B

ABSENCES

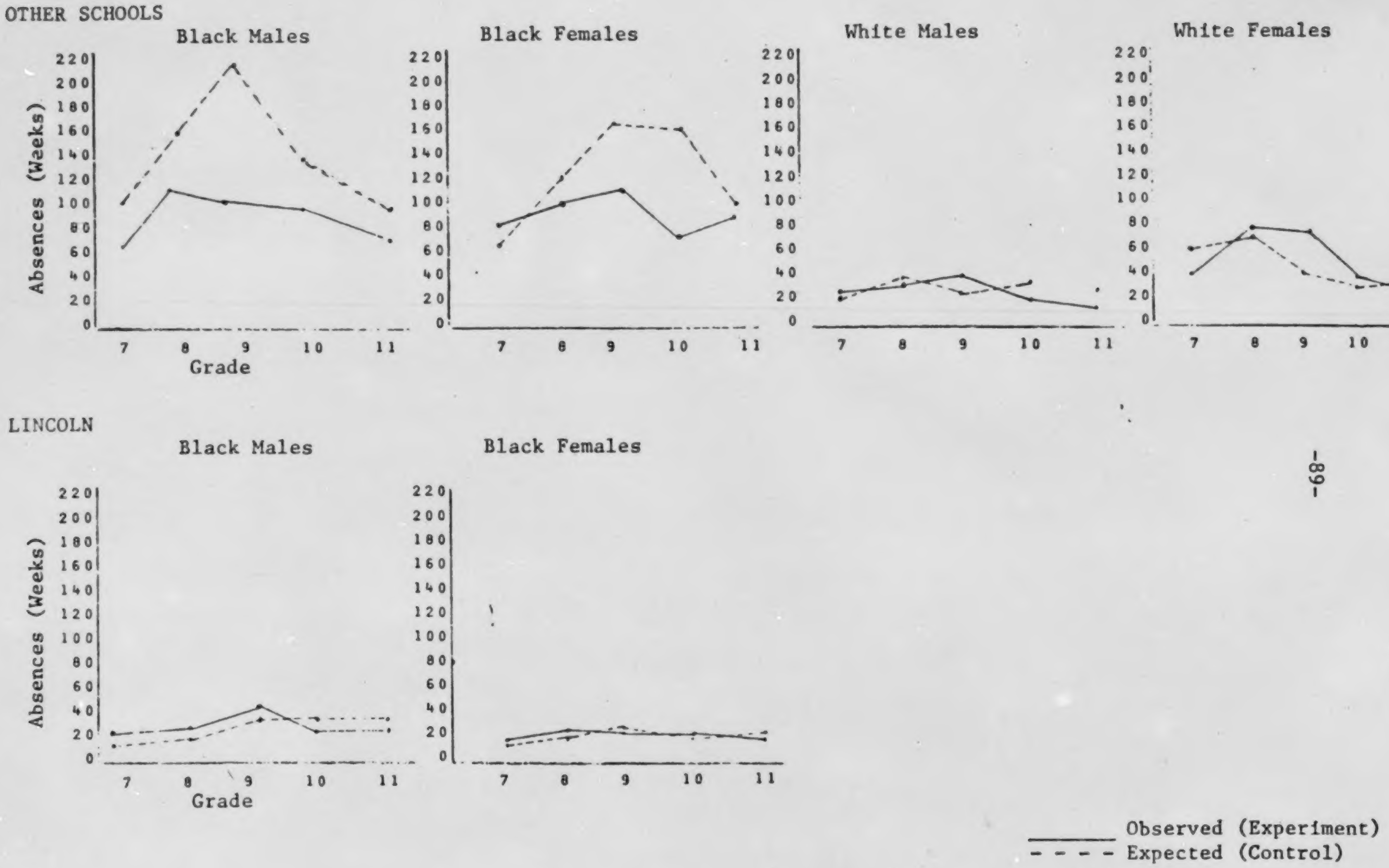


Figure 4 is a result of fewer absences among children in the Experimental group who are 1) black and 2) in Other Schools. Differences are in the proper direction in some of the other charts, but are not marked. Again, it appears that the Experimental group children are better off when they go on to schools other than Lincoln, and it appears that reenforcement of the intervention might have been useful about the time of the tenth grade year.

As in the case of the Teacher Ratings, it seems possible that something in the environments at Lincoln and at Other Schools is different, and related to absence rates. Something which works with the Experiment at the Other Schools, and something which works either against it or with the control at Lincoln.

When we use the standard control, in Figure 6B, differences are accentuated, and perhaps clearer.

The absence data adds a further dimension to suggest a prevention effect which persists at least into the tenth grade year, and which may be conditional to appropriate later school environments.

The Family File Data

The nature of the family file data was described at some length in our Methodology section, #1 The Study Population, which discussed the comparability of the parent YDP SES V experimental and control groups. The Kansas City Missouri Family File is a record of behavior problems in the schools which made referral or other documentation necessary. It includes suspensions, visiting teacher referrals, referrals to other helping agencies -- in short, it is a kind of system banging count.

Data consist of the number of behavior problems noted in the family files prior to the intervention year, and then the number of problems noted, class year by class year beginning with the intervention, or sixth grade year. These problems would include any problem notation in any of thirteen content areas:

Juvenile Court Referrals
Child Research Council Referral
Visiting Teacher Referral
Pupil Services Referral
Home School Coordinator Referral
Other Referral

Suspension

Special Withdrawal

Transfer to Correctional Institutions

Welfare

Truancy

Tardiness

Miscellaneous.

Care was taken to make sure that only problems were coded into the record, and that each problem was counted only once.

An inspection of the chart in Figure 7 will indicate positive effect for all years after the experimental year, except grade year eleven. Both the tenth and eleventh grade differences are statistically significant at the .05 level. Sixth, seventh, eighth and ninth grade year differences are in the proper direction, but fail to reach the significance level in this comparison with the pooled control. The reversal in direction during the eleventh grade year may indicate a need for reenforcement sometime prior to that point in time.

The difference in problem behavior prior to the experimental years is also statistically significant, and favors the control. This is the same finding we described earlier in the Methodology section, although it is produced via a different route of analysis. The report in the Methodology section was in terms of numbers of kids in trouble; while this report is made by number of problems. In both cases, the control is in "better" shape at the outset of the parent project. The

FIGURE 7

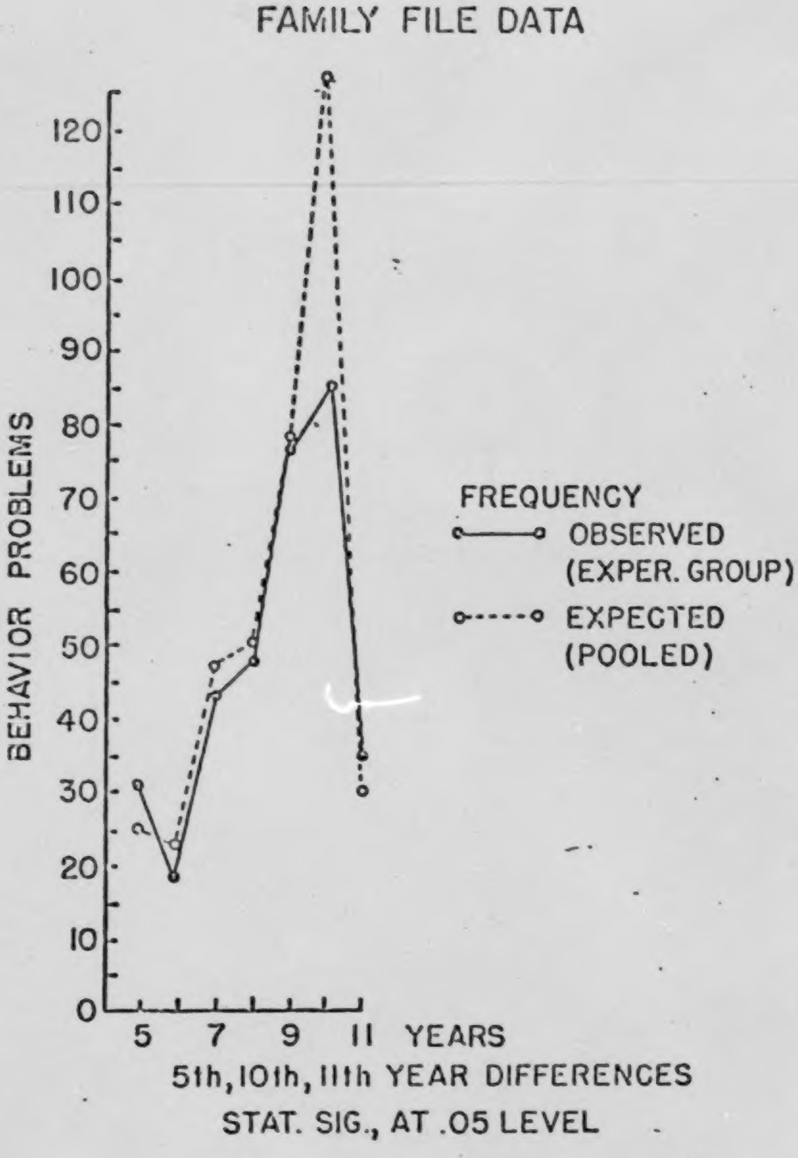
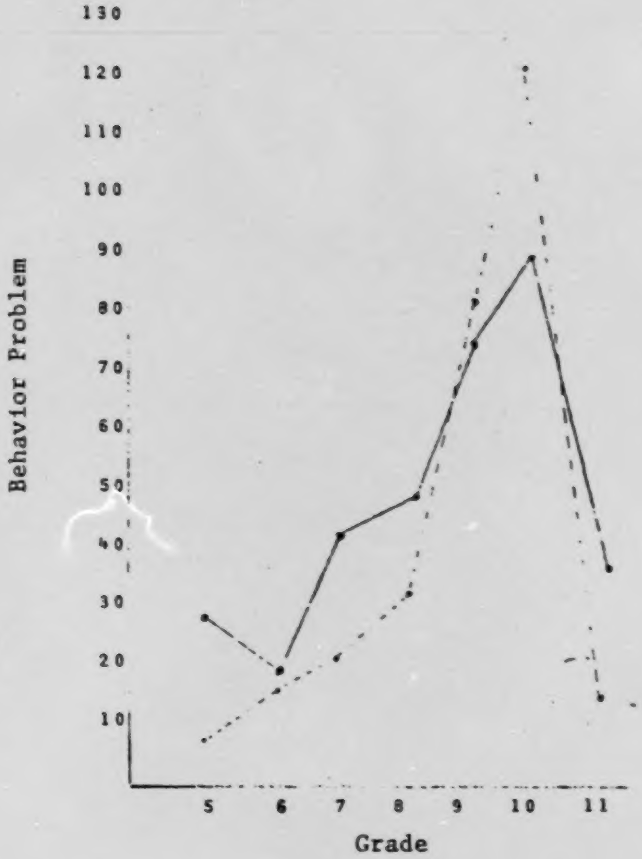

FAMILY FILE DATA
BEHAVIOR PROBLEMS
0
10
20
30
40
50
60
70
80
90
100
110
120
5
7
9
11
YEARS
FREQUENCY
OBSERVED (EXPER. GROUP)
EXPECTED (POOLED)
5th, 10th, 11th YEAR DIFFERENCES
STAT. SIG., AT .05 LEVEL

FIGURE 8

FAMILY FILE DATA

OVERALL



8th grade year difference statistically significant at .001 level.

Experimental group starts from behind the proverbial eightball, but still shows positive results, particularly in the tenth grade year.

The solid line shows the Experimental group problem count. There are even in this comparison with the pooled control, fewer behavior problems in the Experimental group after the intervention.

When these data are compared to the standard or simple control, shown in Figure 8, differences are larger.

FIGURE 9A

Family File Data

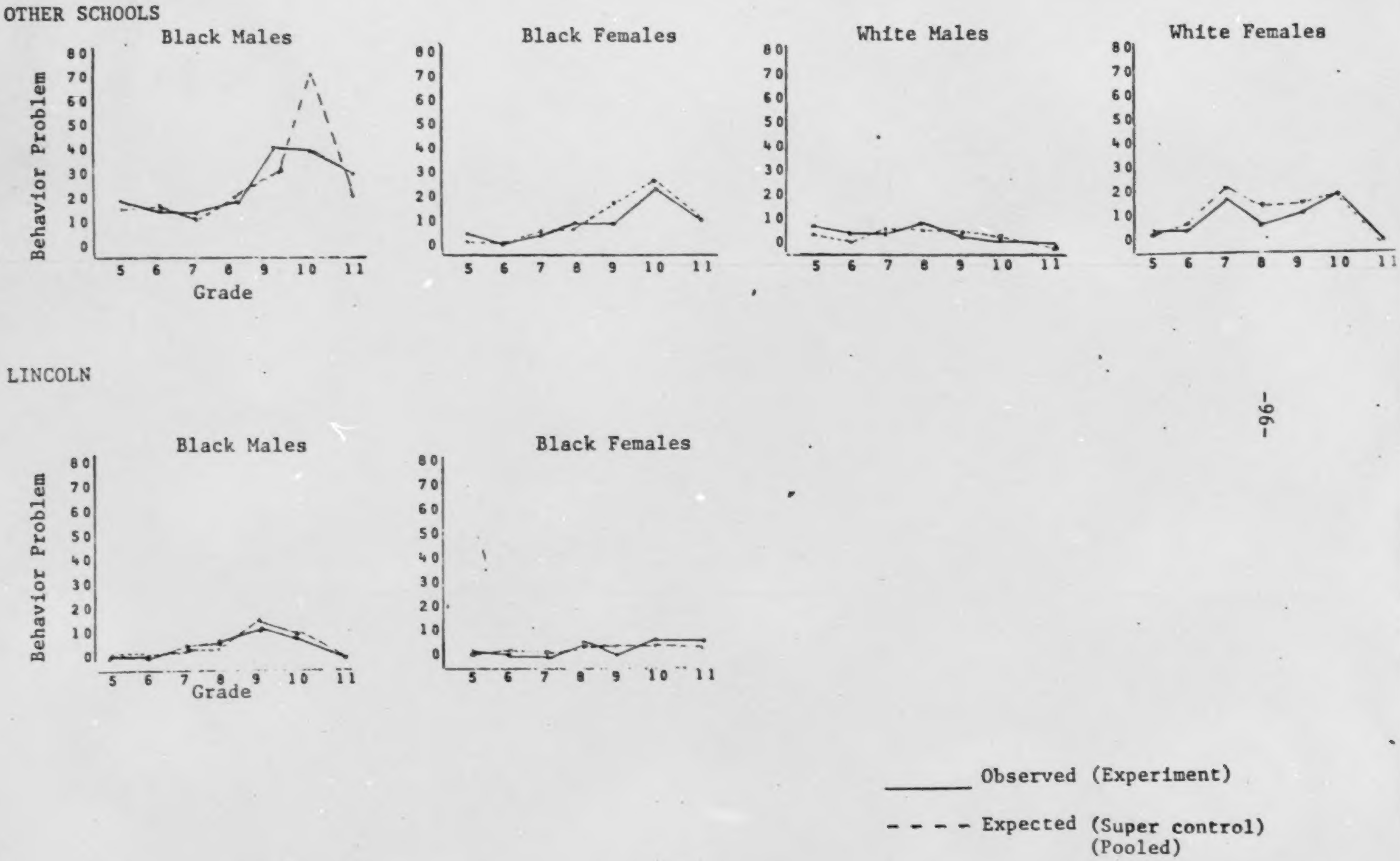
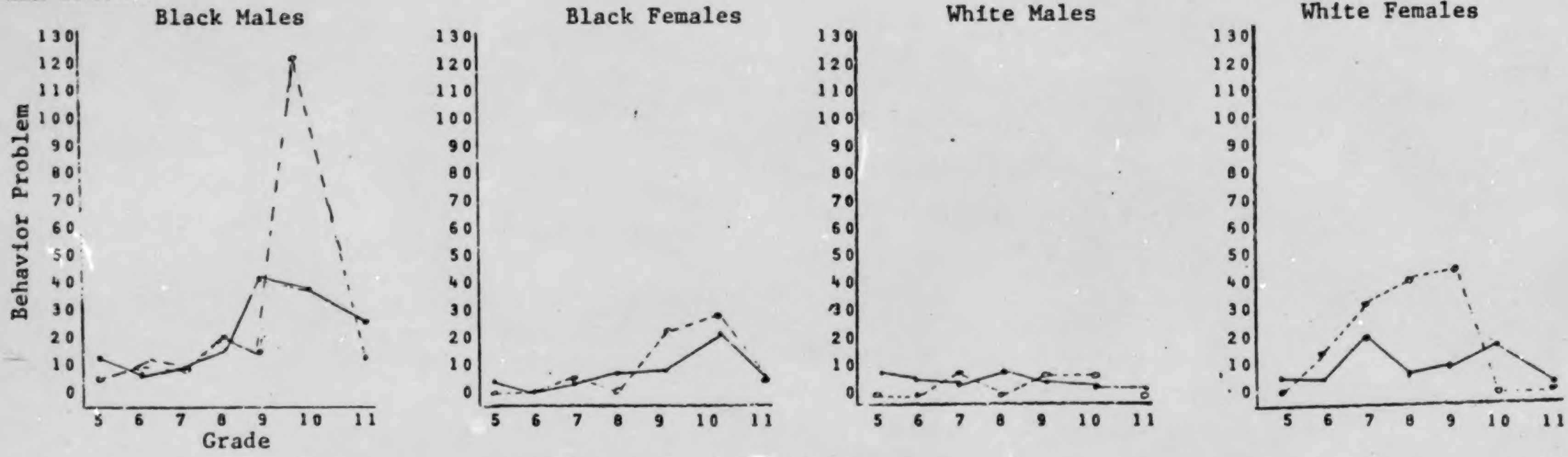


FIGURE 9B

Family File Data

OTHER SCHOOLS



LINCOLN

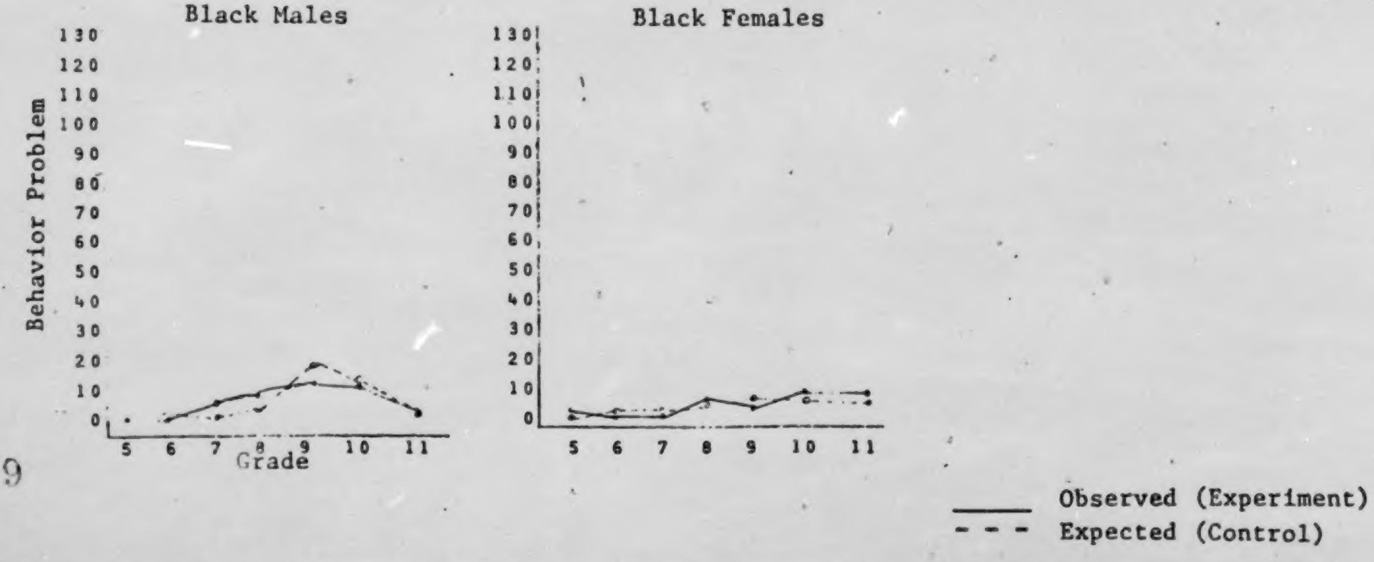


Figure 9A shows the family file data study group by study group, comparing the Experimental group data to the expected frequencies developed by pooling the Experimental and Control group figures.

Dr. Glick reported earlier that he found a difference in these data favoring the Experimental group at the ninth grade year. Some evidence for this finding can be seen in these Figures, except for the Black Males at Other Schools -- in five of the six charts. Similar differences show in the combined charts in Figures 7 and 8, tending to confirm his finding, although the pattern does not reach statistical significance.

Figure 9B shows the same Experimental Group data compared with the Standard Control.

As before, in the other school based measures, the main portion of the positive effect seems to be coming from Other Schools, and possibly from Black pupils only.

Further details relating to the Family File Data may be found in the final portion of this Findings section, "Were Children in Trouble Helped?", which makes before and after comparisons.

SUMMARY OF SCHOOL DATA

Data presented so far suggest that there is indeed a measurable prevention effect for the experiment discernable in the school based on information collected by previous investigators. Data suggest positive effects immediately after the experimental year, and somewhat consistently after that time up to the tenth or eleventh grade year. Dr. Glick's ninth grade year finding can be shown to be continuing after that time, in the same order of data. Possible need for reenforcement seems to be indicated about grade year eleven, as data suggest that the effect may be smaller, or even reversed by that time.

Epidemiologic conditions have been suggested by the data, conditions under which the effect is valid, invalid, or more or less pronounced. Black children who do not go to Lincoln School appear to have the largest benefit from the experimental year, but White children who do not go to Lincoln School also show some positive effects, particularly Male White Children. Black Males also show somewhat greater positive effects than Black Females generally.

The major question remaining is, Can these findings be butteressed with data from the larger community, or is this simply a school-related finding?

We have suggested that the prevention effect does seem to be real, that it persists into the tenth and sometimes eleventh grade years, and that it may be conditional to appropriate later school environments.

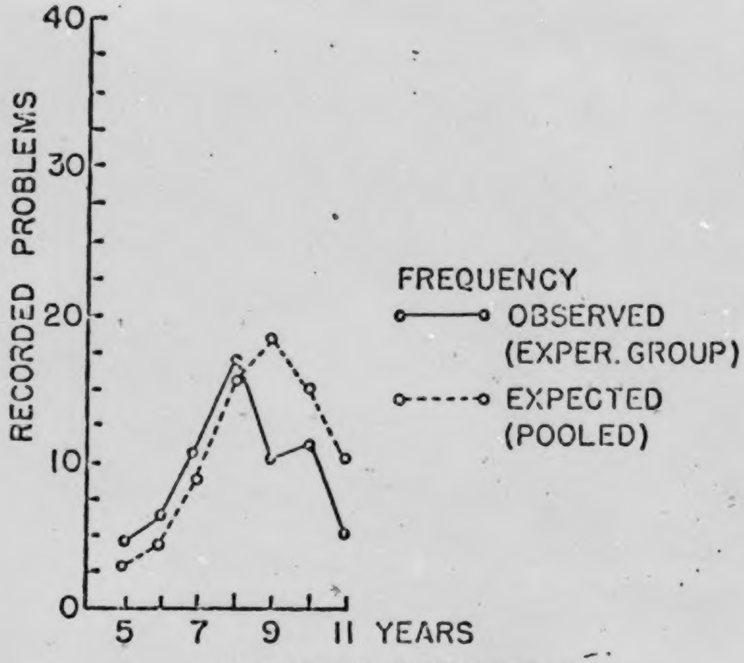
The Juvenile Court Data

The methods by which these data were collected and categorized are described in our Methodology section. Data are summed in these charts as number of recorded problems. Care was taken to assure a count of behavior problems only, excluding juvenile court attention to matters such as custody, family problems, etc. There is some overlap of these data with those of the Family File, because referrals to Juvenile Court is one of the thirteen content areas in the Family Files. The data are by no means identical, of course since the juvenile court has many sources other than the schools for its contacts with children relating to problem behavior.

Data begin at birth, and continue through the eleventh grade year. Data prior to the experimental year is summed, as in previous counts of problem behavior (See Family File Data). The data prior to the experimental year tend to corroborate the family file data which suggested that the Experimental group was in more trouble prior to the experiment than the Control, re-emphasizing the conservative nature of the answer, particularly where the pooled expected frequency is used as the test for difference or effect. The data also tend to corroborate the ninth grade year as significantly different from the sixth, seventh and eighth grade years. It is at this point, in fact, that the Juvenile Court records show a positive effect for the Experiment, an effect which continues after the ninth grade year, but does not reach statistical significance after that time.

Figure 10 presents the number of recorded behavior problems in the juvenile court files for the Experimental Group compared with the pooled expected frequencies. The ninth grade year difference is statistically significant at the .05 level. Differences for grade years ten and eleven are in the proper direction, but do not reach statistical significance. Differences for grade years six, seven and eight are in the wrong direction, but mirror the initial disparity in the two groups. The negative differences are not statistically significant.

FIGURE 10



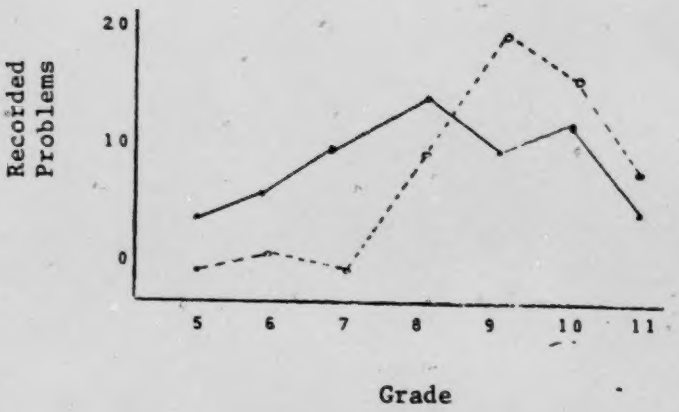
JUVENILE COURT DATA

9th YEAR DIFFERENCE
STAT. SIG., AT .05 LEVEL

FIGURE 11

Juvenile Court Data

Overall

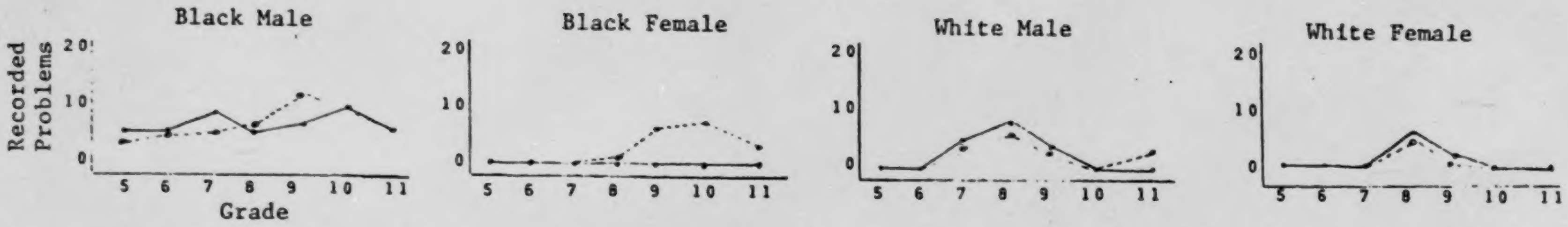


10th and 11th grade year differences statistically significant at .02 level.

FIGURE 12A

Juvenile Court Data

OTHER SCHOOLS



LINCOLN

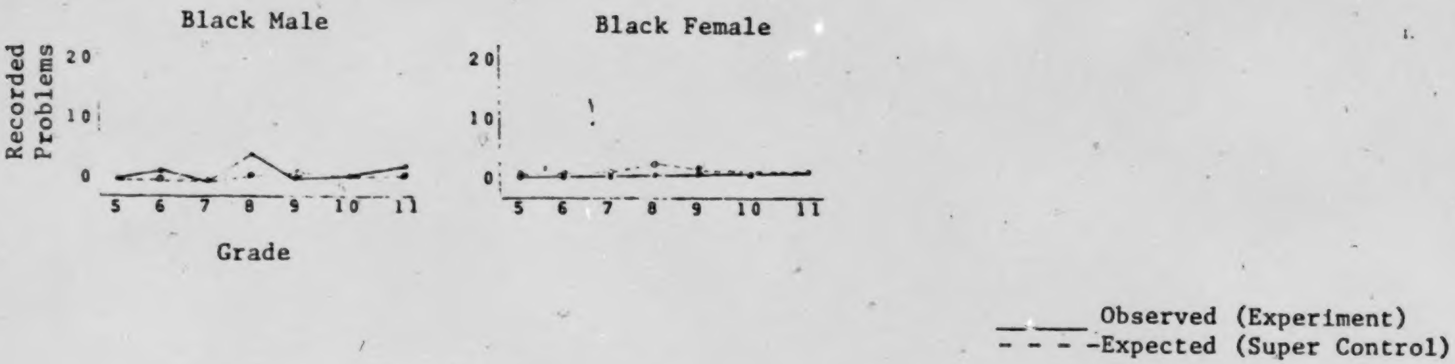
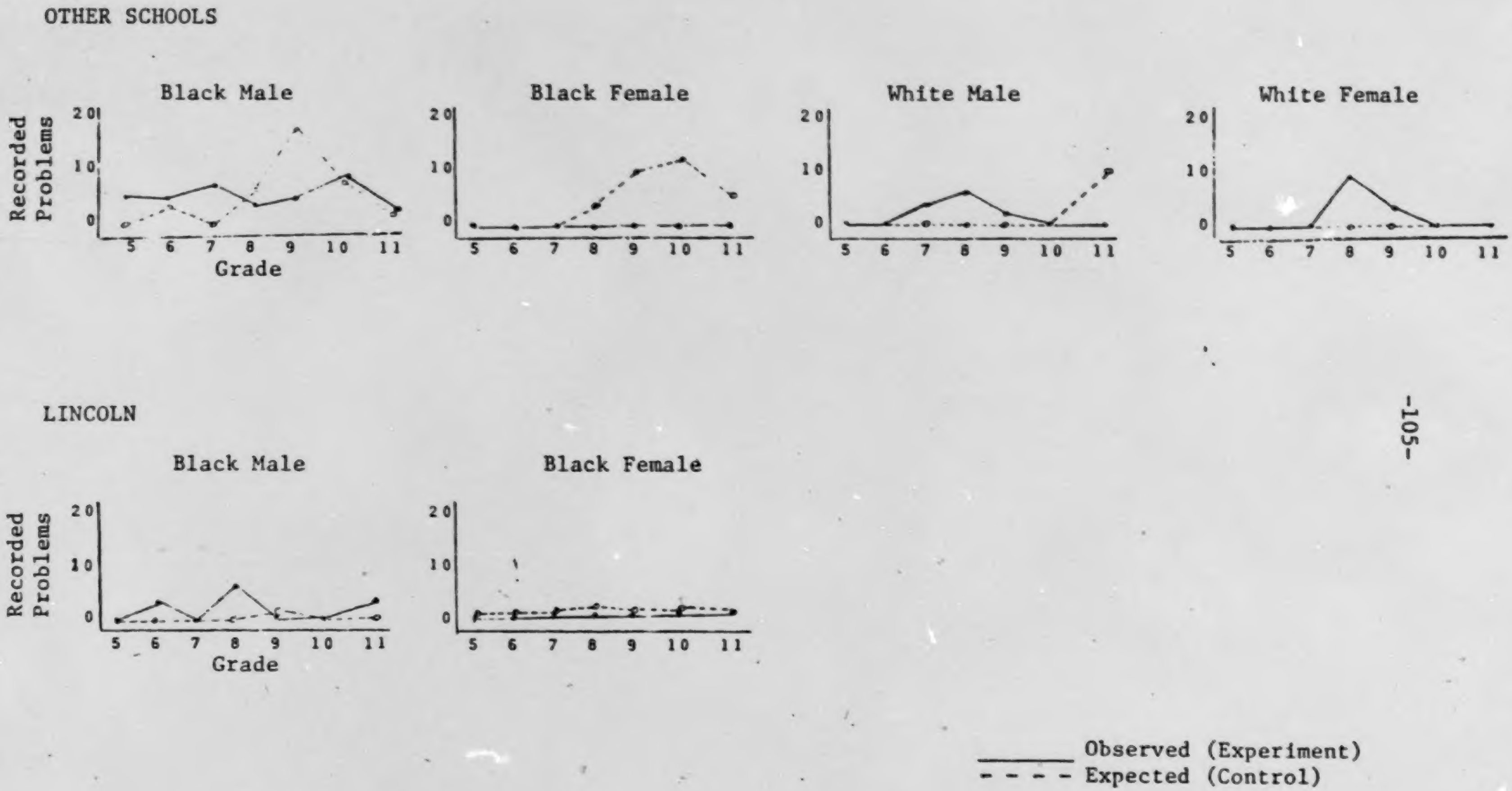


FIGURE 12B

Juvenile Court Data



POLICE DATA

Methods utilized in collecting and coding police data are described in the Methodology section. Police data consist of records of arrests and violations, collected for the entire cohort from birth to including the eleventh grade year. Records are summed as counts of behavior problems, year by year with the exception of the period of time prior to the experiment, which is handled as one unit consistent with our practise in other portions of this report.

Figure 13 presenting data comparing frequencies of problem behavior noted by the police department for the Experimental Group to pooled expected frequencies, indicates that statistically significant differences appear in the ninth, tenth and eleventh grade data. These differences are in the proper direction.

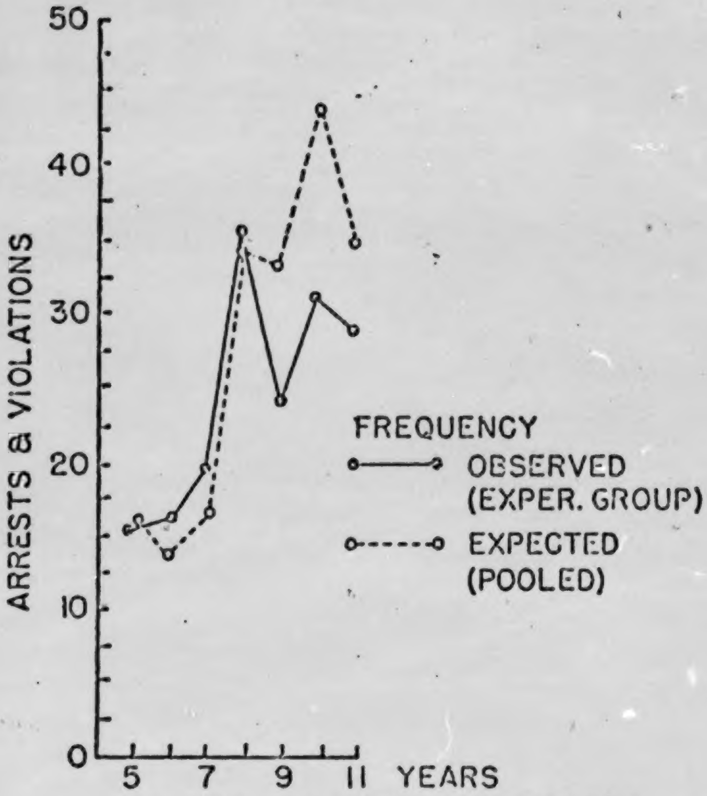
Police data tends to confirm the ninth grade finding reported earlier by Dr. Glick, and to show continued effect after that time even when we use our conservative measure to test the relationship.

Figure 14 shows the same data for the Experimental Group, tested against the standard Control Group frequencies

Figures 15A and 15B show the Police data for the six study groups; first in the A chart comparing Experimental to pooled expected frequencies, and in B to the regular Control Group frequencies.

FIGURE 13

POLICE DATA



9th, 10th, 11th YEAR DIFFERENCES

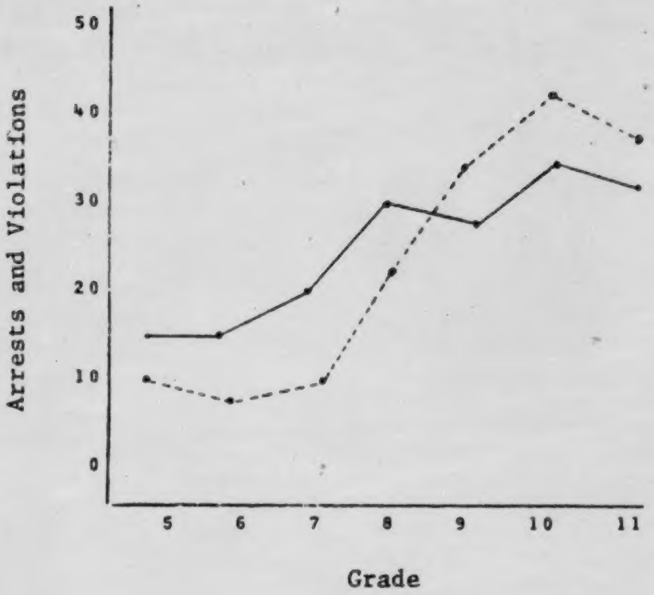
STAT. SIG., AT .05 LEVEL

(MANTEL HENTZEL)

FIGURE 14

Police Data

Overall



8th, 9th, 10th and 11th grade year differences statistically significant at or beyond .01 level.

FIGURE 15A

Police Data

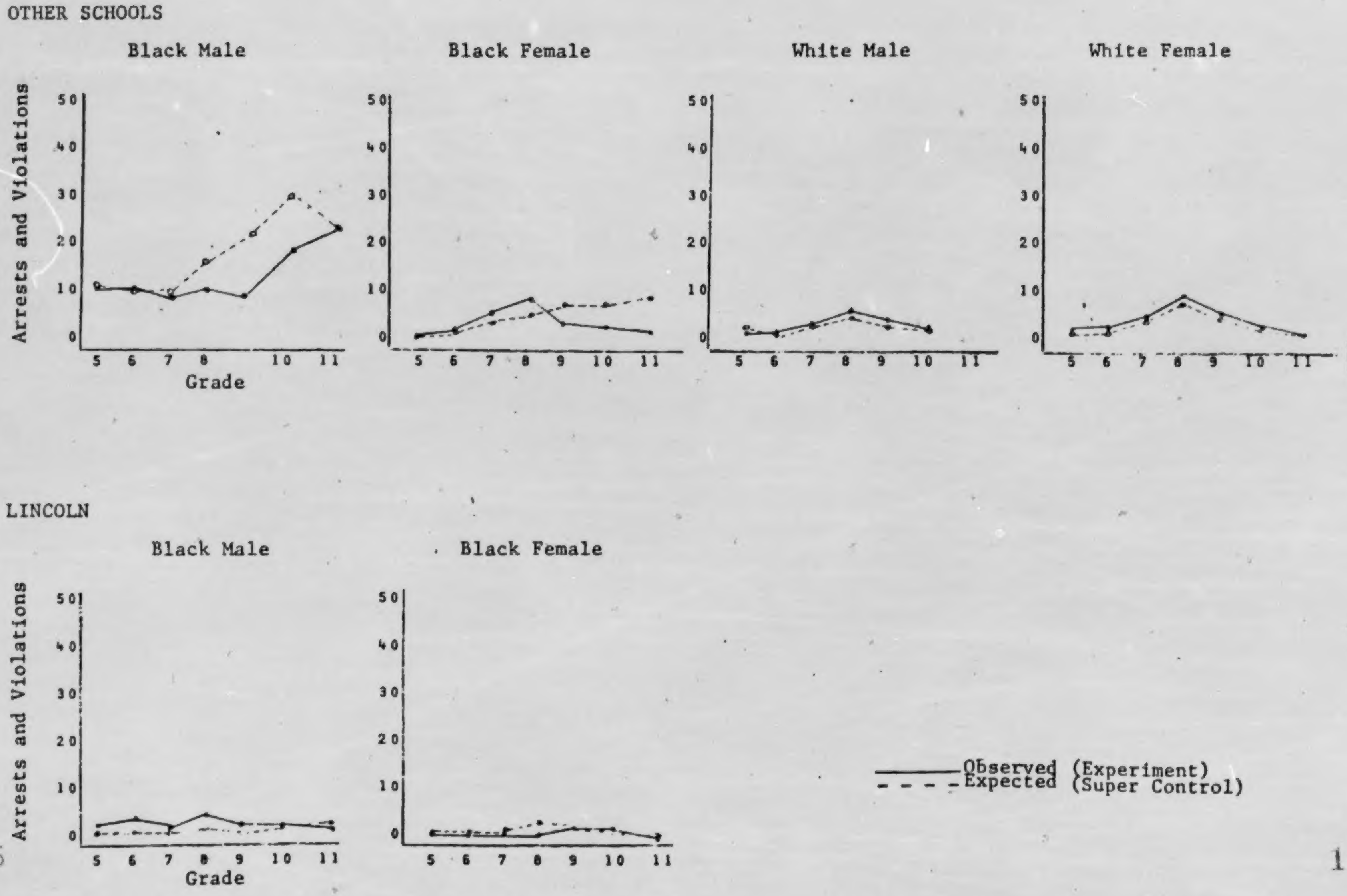
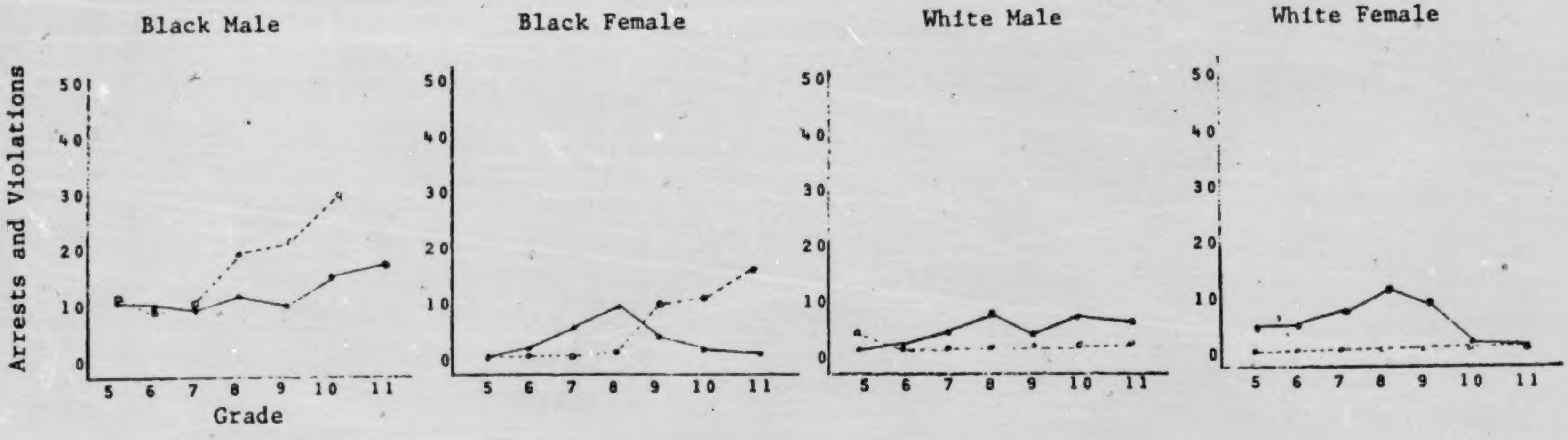


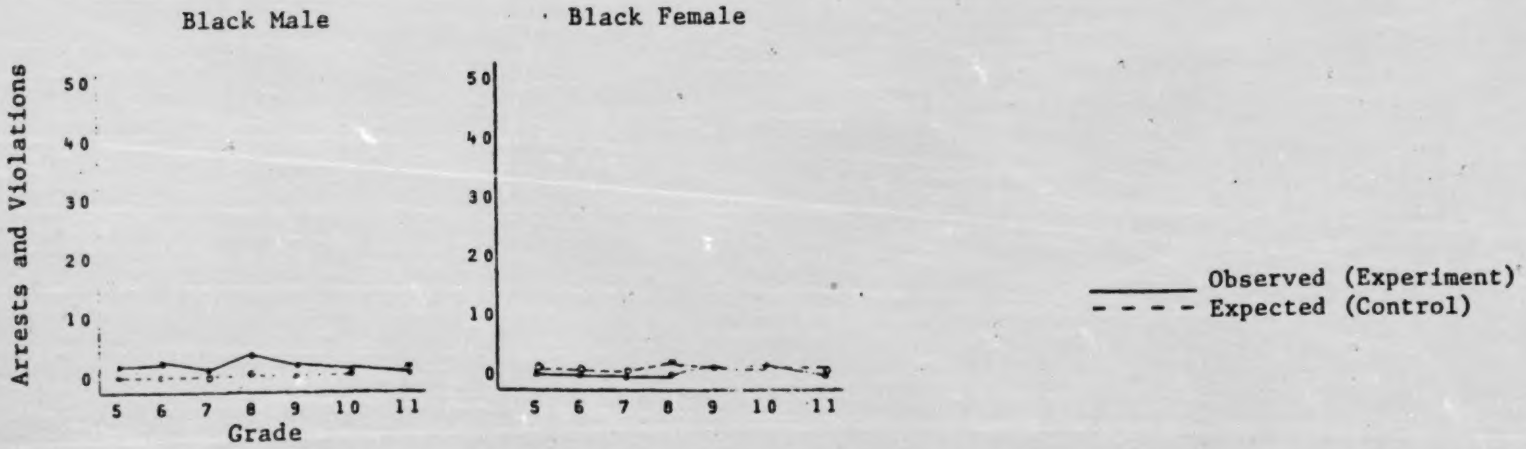
FIGURE 15B

Police Data

OTHER SCHOOLS



LINCOLN



Police Data tend to: 1) confirm the ninth grade finding, 2) extend that finding to grade years ten and eleven, and 3) serve to buttress the school data with similar findings from the larger community.

SUMMARY RELATING COMMUNITY DATA TO SCHOOL DATA

School Data indicate a prevention effect dating from the experimental year, demonstrated in Teacher Ratings of work habits, taking responsibility, getting along with others and self-control. By teacher estimate then, the experiment worked. Absences from school suggest that the students estimated a positive effect as well. Absence rates indicate a prevention effect in our largest study group in the Experiment, (Group #2) immediately following the experiment, and for the total group by the following year. Differences reach statistical significance two years after the experiment, but the pattern is evident from the sixth grade on. Family File data demonstrate prevention effects beginning in the experimental year, and continuing through the four years which follow. The effect tends to disappear the fifth year of the follow up, suggesting a need for reenforcement of the intervention about that time. School Data confirms the report of a positive ninth grade finding, and extends that positive report back to the experimental year and forward into the tenth and eleventh grade years by most measures.

Data are subjected to the most conservative test our consultants could recommend, and presented also in more typical fashion as a direct experimental/control comparison. They are further tested against epidemiologic variables, chosen in early analysis of the cohort for comparability of the Experimental and Control groups.

School Data also indicates that the prevention effect may be pretty well confined to appropriate later school environments, and that it may have been dysfunctional in others. The positive effect for the Experimental group is often reversed at Lincoln School.

Community Data also indicate a prevention effect which may date from the experimental year, although this effect is not as clear at that point in time as the Family File Data effect. Statistically significant differences in the proper direction begin two years after the experiment, in the ninth grade year, in both Police and Juvenile Court data, and continue into the tenth grade year in the Police Data. The pattern is clear throughout the Juvenile Court data: the lines begin to converge after the experiment, cross about a year later, and then remain in proper relationship to each other throughout the follow up period. Police Data present a very similar set of curves, but the positive effect seems to wear off in the final year of the follow up, in that data. However, at the very least, Juvenile Court and Police Data tend to 1) confirm the prevention effect, particularly the ninth grade finding, and 2) extension of the prevention effect into later years, 3) buttressing the School Data findings with findings from social systems of the larger community.

The prevention effect appears to be 1) real, 2) lasting, 3) generalizable to the community.

The Mental Health Data

Western Missouri Mental Health Center is the designated community mental health center for the geographical and political area of the neighborhoods involved in this follow up. The children in the cohort lived in Western Missouri's catchement area in Kansas City. Western Missouri Mental Health Center is also the designated state operated community mental health facility for the western third of the State of Missouri, which includes Kansas City. A search of the patient records at Western Missouri produced evidence that seven children from our cohort had sought mental health services, or a rate of 18 per thousand at risk, over the 17 years of the follow up data. Three of these children were in the Control, and four in the Experimental group.

When the data on these mental health center visits is graphed comparing the experimental condition with the pooled control as shown in Figure 16, there are more visits by children in the experiment in the tenth grade year, and less at the eleventh grade year than might be expected. Figure 17, the standard experimental/control comparison indicates the seventh grade year peak again for the control, but otherwise very mixed results.

When the standard experimental/control count is broken down by later school attended, as in Figure 18, the effects of these later environments specify a conditional outcome we have noted before: children in the Experimental group appear to be experiencing more stress at Lincoln, and the Control appears to be experiencing more stress at the Other Schools.

Number are very small in this section of the data. Note might not have been made at all, if the pattern of the data had not been shown earlier, in teacher ratings, absences, family file data, juvenile court and police records, and in tables showing combined trouble or system banging counts.

Figure 16

Mental Health Center Visits

Experiment/Super Control

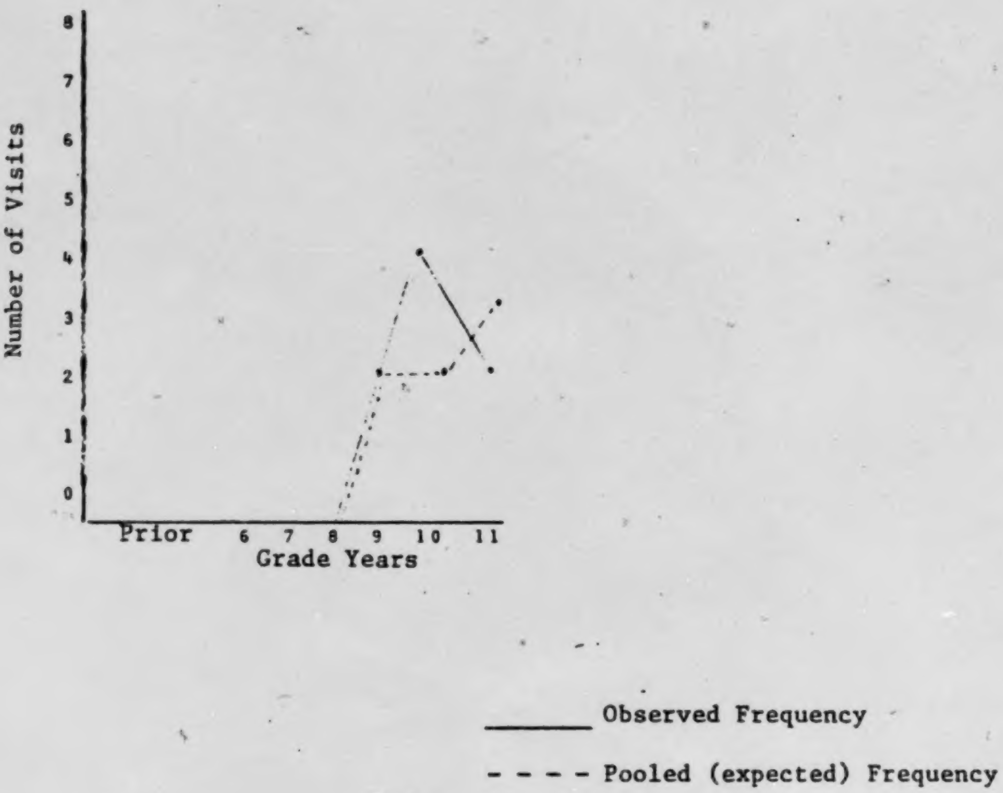


Figure 17

Mental Health Center Visits

Experiment/ Control

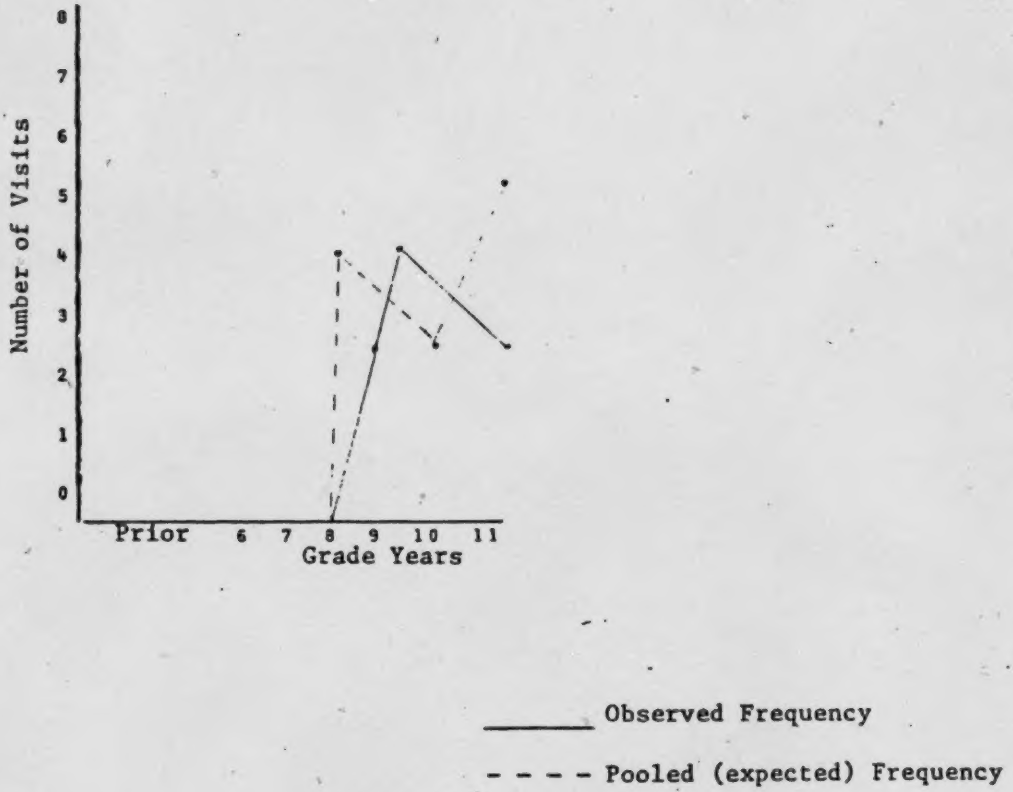


Figure 18

Mental Health Center Visits

Lincoln School

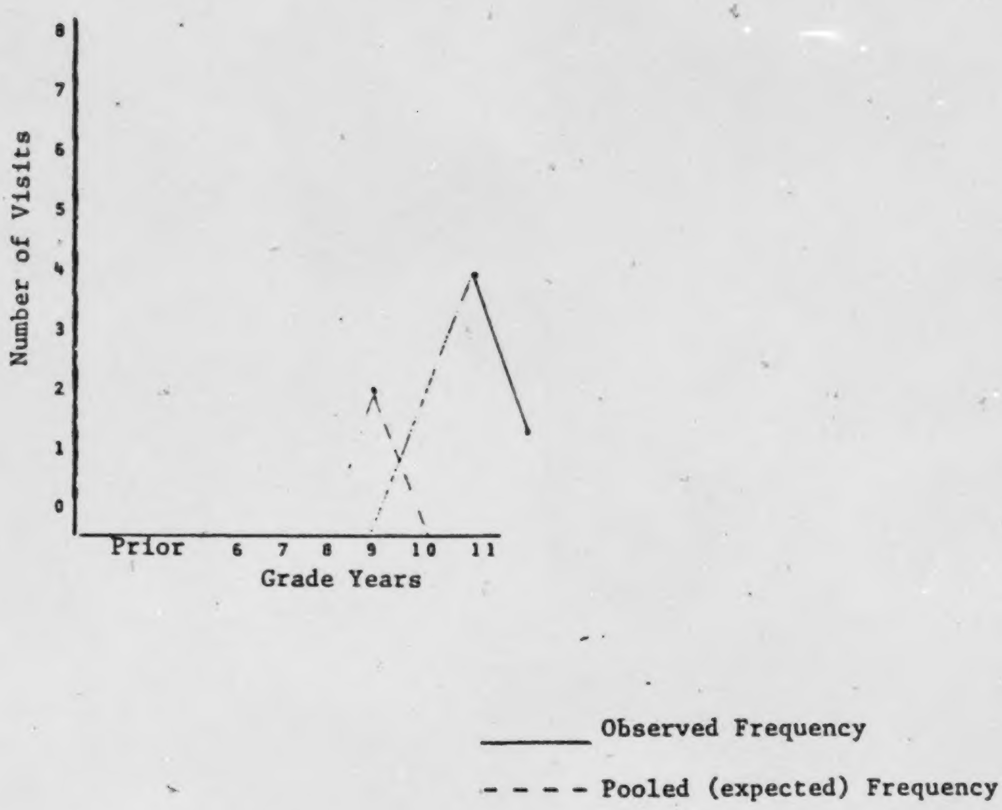
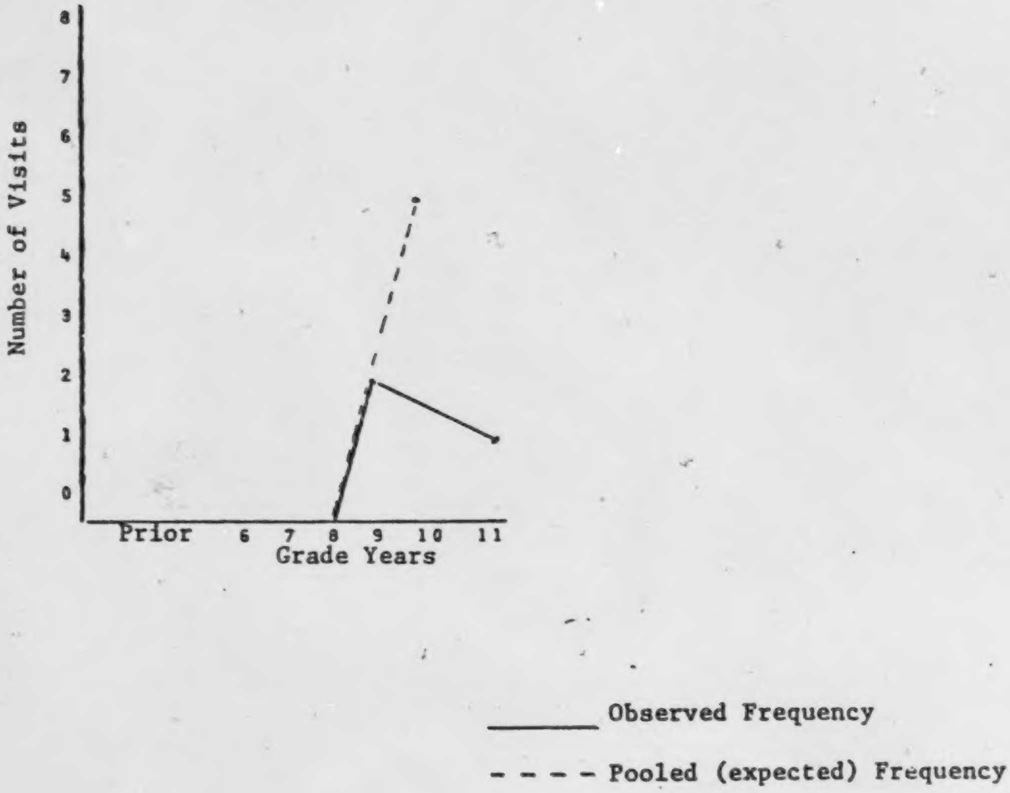


Figure 18 (cont.)

Mental Health Center Visits

Other



WERE CHILDREN IN TROUBLE HELPED?

One of the goals of the Kansas City School Behavior Project was to prevent children already in trouble from engaging in further problem behavior through education in appropriate methods of social interaction.

This goal is difficult to evaluate in terms of the total project, because only one of the cohort comparison groups presents sufficient data for analysis. Group 2 (Black males who went on to schools other than Lincoln) presents problem rates prior to the experimental year which are similar in both the experimental group and the control. Rates are approximately 50 children in trouble, per thousand at risk. This group is also our largest study group (N=114). Ns are small in the other comparison groups available, or there are no children in trouble in one half of the dyad.

PROBLEM BEHAVIOR RATES PRIOR TO EXPERIMENTAL YEAR:

FAMILY FILE DATA BASE

	Comparison Group	Number in Trouble: Number at Risk	Rate Per 1000 at Risk
1.	WMOE	3:16	187
	WMOC	0:04	0
2.	BMOE	4:70	57
	BMOC	2:44	46
3.	WFOE	3:25	120
	WFOC	0:04	0
4.	BFOE	2:55	36
	BFOC	1:50	20
5.	BMLE	0.14	0
	BMLC	0:30	0
6.	BFLE	1:14	71
	BFLC	2:60	33

Group 2 also presents mixed outcome data, in that one measure suggests the control may fare better than the experiment. Teacher ratings are slightly higher for this control group at the 11th grade year. All other measures show the experimental group to be in less trouble than would have been expected. Such mixed findings might indicate that some of the early problem behavior continued after the experimental sixth grade year.

Inspection of the data shows that four children in this experimental group of seventy children had family file records prior to the experimental year. Of these four, one child had no further record, and one no further record after sixth grade. Neither of the other two children had records in the ninth, tenth or eleventh grade years. By this measure then, all four were out of trouble by the ninth grade year.

Two of these same four children also had a juvenile court record prior to the experiment. One never repeated. The other had a juvenile court record in the ninth and tenth grades, but no new problems in the eleventh grade year. None of the other sixty-six children in this group had a prior juvenile court record.

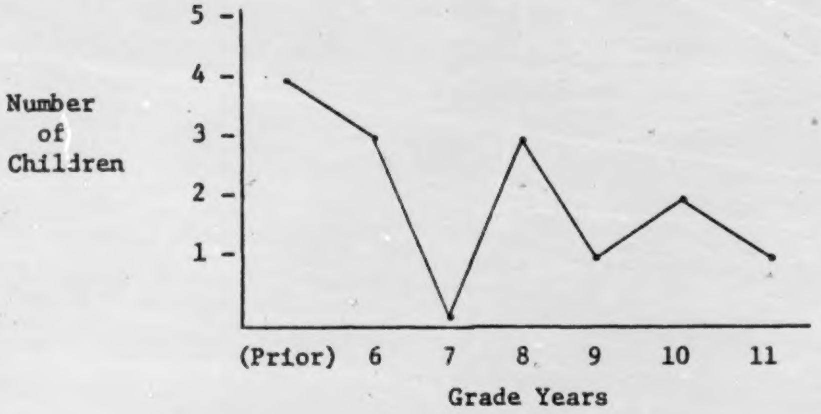
Three of the same four children also had police records prior to the experiment. One had no new offenses after that time. One had two further offenses in the 10th grade year, and the third had offenses in the 8th, 10th and 11th grade years.

This search of the case histories suggests that the rate increase in problem behavior from prior to the experiment to the eleventh grade

CHILDREN IN TROUBLE PRIOR TO EXPERIMENT:

BLACK MALES, OTHER SCHOOLS ONLY, EXPERIMENT

ALL OFFENSES, FAMILY FILE BASE

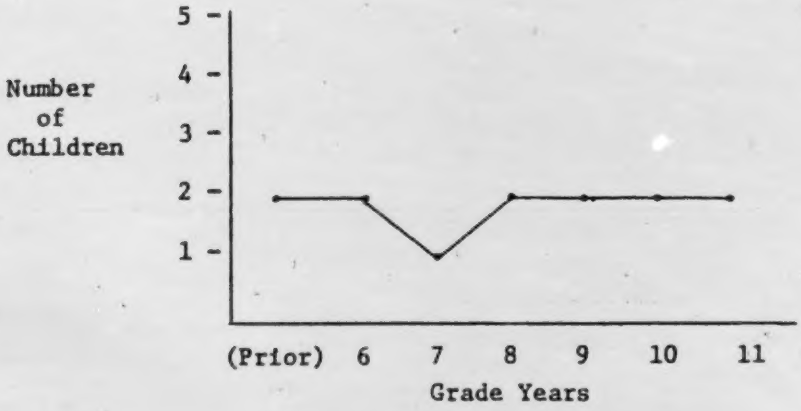


CHILDREN IN TROUBLE PRIOR TO EXPERIMENT:

BLACK MALES, OTHER SCHOOLS ONLY, CONTROL

FAMILY FILE BASE

ALL OFFENSES



year is probably not a result of children in trouble continuing, or returning to trouble-making, but primarily a function of new children having trouble during the eleventh grade year, presumably unable to cope with new stresses and perhaps needing reinforcement of the experimental year program.

Reinforcement might be useful for all these children. In the seventh grade, immediately after the experimental year, there were no offenses from this group.

In the control group of forty-four children, two had family file records prior to sixth grade. One continued to have entries in the family file in grade years six, seven, eight, and nine. The other had no further school record of problem behavior, but did make both juvenile court and the police records in the sixth, ninth, tenth and eleventh grade years. The first pupil added juvenile court and police records to complete the picture for ninth, tenth and eleventh grade years. Both pupils started out in trouble and were in trouble at the end of our follow-up period, in contrast to the pupils in the experiment, only one of whom was in trouble at the close of the follow up period.

COMPARATIVE RATES FOR CHILDREN IN TROUBLE*
PRIOR TO EXPERIMENT (BMO ONLY)

Group	Rate Prior to Experiment	Rate at Close of Follow Up
Experiment	1000	250
Control	1000	1000

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*Children in trouble (BMO) only. N for children in trouble = 6.

DELINQUENCY RATES PRIOR TO EXPERIMENT

FAMILY FILE DATA BASE

Comparison Group	Actual	Rate per 1000
Total Study Population	18:386	47
Experiment	13:194	67
Control	5:192	26
	386	
Male	9:178	51
Female	9:208	43
	386	
Black	12:337	36
White	6:049	122
	386	
Lincoln School	3:118	25
Other Schools	15:268	56
	386	

The data thus far are build on the same information base as early reports from this project detailing behavior problems, the family file of the Kansas City, Missouri public schools. Replication of Dr. Glick's data gathering methods for two further years of school data, plus the addition of police and juvenile court data, permits the statement about conditions five years after the experiment for the children he noted had problems prior to project intervention.

If we take advantage of the complete juvenile and police records which were added by our staff, we can make a more complete statement of the nature of 1) the problem as it existed prior to the experimental year, and 2) the degree to which children with problems prior to the experiment were helped.

DELINQUENCY RATES AT CLOSE OF FOLLOW UP (11th GRADE YEAR) COMPARED TO BASELINE RATES

Comparison Group	Baseline Rate	Follow Up Actual	Follow Up Rate
Total Study Population	88	69:386	179
Experiment	21	31:194	160
Control	13	38:192	198
Male	19	50:178	280
Female	15	19:208	91
Black	24	62:337	184
White	10	7:049	143
Lincoln School	5	15:118	127
Other Schools	29	54:268	201

Estimates of the magnitude or the degree of involvement of this cohort in behavior defined as problem behavior by the community at large have to be revised upward when information about juvenile court records and police records is added to the data base. In making the table which follows no child was counted in more than one category. That is, if he had a family file record and also a juvenile court record, he was only counted once. Mental Health Center admissions were not included.

Comparisons may be made by viewing the following table, Delinquency Rates Prior to Experiment, All Sources along side the Family File based table just presented. Rates are about doubled by adding this information. Rates for the Control are raised considerably more, from 26 per thousand population at risk to 78. This relative increase for the Control appears to be randomly spread through the ecologic dyads of the study population representing possible sex, race and environmental differences. The increase for the Control also helps to bring it in closer adjustment with the Experimental group in the number of children who were in trouble prior to the project intervention, although the Experimental group still contains the larger proportion of these children.

DELINQUENCY RATES PRIOR TO EXPERIMENT

ALL SOURCES

Comparison Group	Actual	Rate per 1000
Total Study Population	37:386	96
Experiment	22:194	113
Control	15:192	78
	386	
Male	22:178	124
Female	15:208	72
	386	
Black	27:337	80
White	10:049	204
	386	
Lincoln School	7:118	59
Other Schools	30:268	112
	386	

If we return to our criterion group, the Black males who went to schools other than Lincoln, and add this new information, what happens?

Problem behavior rates prior to the experimental year, based on all sources of data, are shown in the summary table, by the same six study groups we utilized early in this chapter. Comparing the rate for Group 2, we discover that the rate is changed from 57 to 114 for the Experimental group, and from 46 to 182 for the Control. We now show 8 children in trouble in the Experiment instead of 4, and 8 in the Control instead of 2.

Of the eight children in the Experimental group who were in trouble with either the school, the juvenile authorities or the police prior to sixth grade, four had clean records in the final year of our follow up. Of those in the control, a majority, six, were still in trouble.

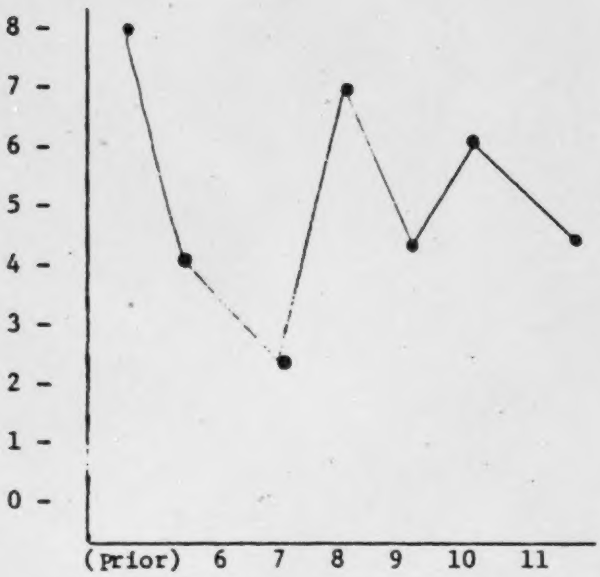
As shown in the two following tables, the eight Control group children were all in trouble in two of the follow up years, grade years eight and ten. The Experimental group shows a somewhat clearer and steadier decline over the years, with no year showing all eight still in trouble.

Again, the reader should be reminded that the Prior figure is a cumulative one, and no value should be attached to the "apparent" drop at sixth grade.

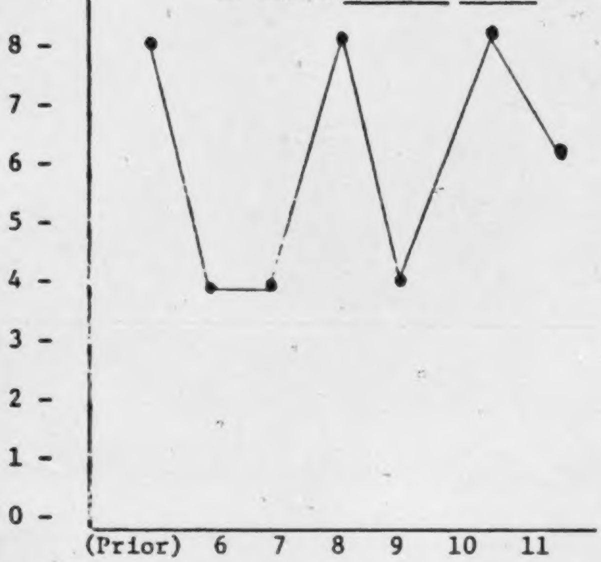
CHILDREN IN TROUBLE PRIOR TO EXPERIMENT:

BLACK MALES, OTHER SCHOOLS ONLY, EXPERIMENTAL GROUP

ALL OFFENSES, ALL SOURCES



AS ABOVE CONTROL GROUP



COMPARATIVE RATES FOR
CHILDREN IN TROUBLE
PRIOR TO EXPERIMENT (BMO ONLY)
ALL SOURCES

Group	Rate Prior to Experiment	Rate at Close
Experiment	1000	500
Control	1000	750

Summary

A revised Delinquency Rate table, reflecting data from all three sources of information on problem behavior expressed by children in the study prior to and five years after the project experiment still suggests positive findings for the experiment. The rate for the Experimental group increased from 113 to 160, while that of the Control increased from 78 to 198. If the same proportion of the Experimental group children were in trouble, in relation to the number in trouble at the outset of the study, as we find in the Control, the Experimental figure would be 287, or nearly twice (179%) as large.

When we began with Family File data only, the rate for the Experiment was raised from 21 to 160, while that of the Control was raised from 13 to 198. On this basis, the final Experimental rate should be 319, or nearly twice (199%) as large as we found.

The triangulation of the more nearly complete data collection produces a slightly more conservative answer, but the answer is ese entially the same. The final Experimental rate is far lower than might have been expected.

If one were to apply the most conservative test, recommended by one of our consultants (see earlier description in Methodology) working from the total data, pooling Control and Experimental frequencies as our expectation, to produce new super control rate of 96 prior to the experiment and 179 as a final rate, the figure becomes 187%, again requiring an Experimental rate increase of nearly 200% to suggest accepting the null hypothesis.

If one could figure the rates without the Lincoln group, the spread between the Experimental and Control rates would be increased slightly.

Twenty two children were omitted from the analysis because there were no control groups to match them in their racial classification. If these children were added, the experimental outcome would be enhanced slightly in comparison with the control rate, as there were five children in trouble prior to the project year and only two at final follow up. Rates would be adjusted as follows:

	N	Rate 1	Rate 2 (Adjusted)
Total Study Population	408	96	174
Experiment	216	120	153
Control	192	68	198

DELINQUENCY RATES AT CLOSE OF FOLLOW UP (11th GRADE YEAR) COMPARED TO BASELINE RATES

ALL SOURCES

Comparison Group	Baseline Rate	Follow Up Actual	Rate
Total Study Population	96	69:386	179
Experiment	113	31:194	160
Control	78	38:192	198
Male	124	50:178	280
Female	72	19:208	91
Black	80	62:337	184
White	204	7:049	143
Lincoln School	59	15:118	127
Other Schools	112	54:268	201

Ten per cent (N=37) of our study population was in trouble with either the schools, the juvenile court authorities, or the police when the project began. Six years later, in the eleventh grade year, eighteen per cent of the population was in trouble with one or more of these systems.

At the outset, sixty per cent of the youngsters in trouble were in the experimental group. At grade eleven, forty-five per cent. This finding suggests that children were being helped. The control had become the larger participant in problem behavior.

An intensive examination of the only epidemiologically comparable group in the study to exhibit sufficient data prior to the intervention disclosed that children in the experimental group did in fact "improve."

Half of these children improved, while only a fourth of the control portion improved. As can be seen in the following table, a further suggestion that children may have been helped can be drawn from the drop in absolute rates of problem behavior for white children in the experiment at other schools, and the failure of rate for black females in the experiment at Lincoln to increase as it did for black males.

Such increase as exists in the data then, appears to be a result of new children getting into trouble rather than of those in trouble continuing to be in trouble.

DELINQUENCY RATES AT CLOSE OF FOLLOW UP (11th GRADE YEAR) COMPARED TO BASELINE RATES IN SIX STUDY GROUPS ALL SOURCES

			Prior		Follow Up	
	Group	N	Actual	Rate	Actual	Rate
1.	WMOEx	16	4	250	3	188
	WMOC	4	0	000	3	750
2.	BMOEx	70	8	114	19	271
	BMOC	44	8	182	15	340
3.	WFOEx	25	6	240	1	40
	WFOC	4	0	000	0	000
4.	BFOEx	55	2	36	3	55
	BFOC	50	2	40	10	200
5.	BMLEx	14	1	71	4	286
	BMLC	30	1	33	6	200
6.	BFLEx	14	1	71	1	71
	BFLC	60	4	67	4	67

What Happened in the Later Schools?

(The reader would be well advised to re-read the final paragraphs of Dr. Edgertons remarks paraphrased from notes taken at the ROR Workshop. We know that much of what he surmised actually happened, from interviews with students reported by earlier investigators).

The children in this study were in secondary schools from about 1963-64 to 1968-69. They were the "class of 1969." Those six years encompass a lot of social change. School integration, the Vietnam conflict, the assassinations of persons in high office and visibility including Martin Luther King and rioting in the streets and schools all impinged upon their lives and the lives of their teachers and parents. Social mobility borne of new emphasis on civil rights affected all our cities during these years.

The children in the experiment were being taught to participate in, to control in part, and certainly to cope with change. They were developing confidence in their ability to cope with change.

A child with these skills, placed in an environment in a state of flux, with turnover in administration, faculty and student body might do very well, and certainly might manage without banging into the system in any big way if he were motivated to succeed. Flexible, or disorganized environments might present assets.

The same child, or another similar child with similar skills, placed in a traditional lock-step environment might well make waves, ask questions, and generally create trouble just doing what worked in 6th grade.

Children from the neighborhood, without the special training for coping with change, might have a lot of trouble as their world shifted around them, repeatedly. It might be harder for them to figure out what was going on -- todays solutions wouldn't work next week. These children might, on the other hand be pretty comfortable where the rules were known, the head man was a known quantity and history was some help.

Interviews with people familiar with Kansas City schools, particularly with Lincoln and Central, where most of the children in the study went for secondary education, describe the schools as different in some of these respects.

Central has been described as having a "good" academic image in the inner city -- and as having nearly all white students in 1960, nearly all black by 1970. Movements of more affluent and successful families toward the suburbs helped to account for this. Families nearly all had to buy homes to move into the area Central served. Teachers and administrators moved in and out of the school. Central also had a reputation for an administration which was flexible and people oriented. In any case, it certainly was a transitional phase. The staff remained mostly white during this time, with turnover at all levels.

Lincoln, on the other hand, had been all black for some time. One administrator served Lincoln for nearly 40 years. Another spent nearly all of the time of our follow up as principal. This stability of leadership suggests solid traditional organization, possibly somewhat hierarchical in nature, and probably with a set of clear constant rules and regulations. A student would know who was in charge, and where he stood.

Lincoln may have been, from our accounts, more formal in organization; Central more egalitarian.

If our description is somewhere near accurate, and one must realize the difficulty involved, the differences we found from the one school setting to the other make sense. The stress would be greater for children from the experimental classrooms at Lincoln, and for the control at Central.

We have not been able to conduct a retrospective study of the school environments. We certainly have wished we could, or that the finding had surfaced in time to assess the effect on the spot, or that secondary school environments had been part of the parent project design.

If one had the resources, a study of disciplinary problems in the two schools might be possible, or a study of teacher comments on cumulative records. We would have to start, at minimum, with a random sample of the enrollments those years and track down the records pupil by pupil in central office files.

There is some indication in our informants reports that all-black schools in the Kansas City Missouri system traditionally have been more formal in style, traditional and somewhat lock-stepped in organization. If this is so, Lincoln may have been like that. Certainly there were a smaller number of discipline and other problems surfacing at Lincoln than at Central. If the rules are not clear, it may be easier to get into trouble, more referrals may have to be made. The "delinquency" rate at Lincoln, according to Family File Data, was less than half that of Central and the Other Schools prior to the experiment, and from all sources at the close of the follow up 127:201.

The literature isn't of much help, although a Kansas City investigator (Doll, 1969) identified administrative leadership in elementary schools as an important variable in problem oriented schools in the inner city. A study of schools in Harlem (Clark, 1968) also identified the principal as important in differentiating school environments. Polar types were described by Doll as 1) hierarchical, rigid, by-the-book, operating willingly within a closely structured bureaucracy and traditional custom and 2) personnel-oriented, flexible, less career oriented, attentive to local differences and needs, willing to buck the system. Some of these qualities may describe leaders in our secondary schools as well. A classic study at the International Harvester Company (Fleischman 1955) pointed out the problems which can result when only a segment of the people in an organization are taught new ways of performing in their work roles. Similar forces may well have been at work in certain of the later school environments.

DISCUSSION

The Kansas City School Behavior Project was born of difficulties posed for the schools and society generally, by pupils who for one reason or another did not function successfully or satisfactorily with their fellow human beings. Efforts to solve these problems through clinical service arrangements with the Greater Kansas City Mental Health Foundation had proven that solution was inadequate to the need. It was literally impossible to give individual treatment to all children needing it. It was felt that any long range solution would require extensive effort to prevent such problems and promote mental health, rather than treatment at a more serious stage. Such efforts, it was thought, might best be expended on the development of certain classroom methods and techniques in which teachers could be trained. These methods and techniques would be aimed toward producing learning conditions in the classroom which might be more emotionally healthful for all children, and which might thereby prevent the mildly disturbed child from getting to be a more serious problem. Major emphasis of the training program, and hence the classroom experiment were interpersonal relationships with pupils and pupil-to-pupil, and the teacher as a group worker utilizing then new concepts in group dynamics and skill training in techniques of group management, utilizing small group interaction in the classroom.

If successful, such a program might both reduce the need for help and increase the effective manpower ratio.

Behavior problems continue to be a number one issue in the public schools, and in our communities. A recent survey of school personnel, personnel in children's agencies and in other helping professions rated behavior problems their prime concern (University of Kansas, 1973). Workshops, textbooks and consultants proliferate in this area. Every solution offered, with few exceptions, still demands individual treatment, whether behavior modification, reality therapy, medication or other modalities prevail. Manpower still is far behind demand for services.

Crime by children, some of it serious and commited by children not yet in their teens, is becoming a problem of growing concern to parents, police and school authorities across the country (Kansas City Times, 1971). Crime throughout the nation has increased to the point that insecurity on our streets and in our homes has been declared one of our foremost national problems. If official records are an adequate index, juvenile delinquency and crime are outracing our capacity to deal with them (Eisner, 1969).

The Report of the Joint Commission on the Mental Health of Children and Youth suggested we have in our nation alone 95,000,000 children in need of remedial help. Current emphasis in federal and state programs on the problems of children indicate an acceptance of the priority of these needs. Every examination of health manpower indicates that the need is far greater than can be met with current conceptual and technical formats which require highly trained individual treatment modalities.

The problem in the schools seems to have grown substantially worse in the last few years. Bicycle thefts increased in Los Angeles 70% over the nine years from 1962 to 1971. Schools have increased their security forces. Dade County had five men in 1968 and 98 men in 1971 only three years later. South Boston schools are in the news today with stabbings and other violence.

As our society has become more complex and individual expectations and pressures greater, the acquisition and exercise of social and interpersonal skills becomes more and more important in functioning in the everyday world. But what works? In a broad sense the teacher-training program which constituted the independent variable in the Kansas City School Behavior Project represents a way in which the schools might more deliberately and explicitly attempt to meet their obligation in the area of the social-emotional development of children and youth.

The Kansas City School Behavior Project is not new. It may be unique.

In the early sixties James A. Davis of NORC was asked to review existing knowledge about experimental attempts at influencing behavior toward "positive mental health." He reported that while there was some evidence that attitudes could be changed experimentally, none of the experiments dealing with attempts to change behavior had positive results (Davis, 1965).

Gene Stanford and Albert Roark, in their 1974 book Human Interaction in Education remark on the therapeutic virtues of small group interaction in the classroom, but they do so on an experiential basis. They cite no research to indicate positive results in attempts to change behavior, or prevent or ameliorate behavior problems through its use. Conversation with Dr. Roark indicated that they did not find any. Roark and Stanford do point out that children do learn respect for others, careful listening, and that they learn to communicate unambiguously in group discussion. They suggest also that children develop skills in group problem solving, and gain feelings of acceptance and belonging, which they often do not learn in teacher-led discussions. They go so far as to say AS A LABORATORY FOR TEACHING STUDENTS TO GET ALONG WITH OTHERS THE CLASSROOM DISCUSSION GROUP IS UNEQUALLED. The cohesive nature of the classroom group coupled with norms that are similar to those in society in general, can, according to these authors, be a potent force in socializing the student (Stanford and Roark, 1974). It appears likely that that is just what was going on in the sixth grade classrooms of the Kansas City School Behavior Project experiment.

It also appears likely that the Kansas City project with its apparent positive effect in the prevention of behavior disorders, may well be a first, and thereby for the time being, an only.

Because it is unique, we have made every effort to be both conservative and candid in our analysis. But we have not been able to make the positive finding go away. We have instead extended it, linked it in point of time to the experimental year, and buttressed it with data from the larger community. It just will not disappear. We have specified epidemiologic conditions under which it is more or less pronounced.

The value of demonstrating a solid evaluation of one such program should be clear. The feasibility of short course instruction in techniques of managing groups and their utility in the classroom are given considerable impetus. It is not unrealistic to expect that the program could be instituted at modest cost by any urban school system with access to adequate teacher training facilities.

The program also has significance in that it departs from the usual emphasis on individual attention to children and school behavior problems and undertakes to train the teacher as a group worker, which is appropriate to her task.

Finally, we may have learned something about realistic program evaluation. Early follow up failed to show much in the way of either positive or negative results for two years after the experiment. Further data collection based on positive findings in the third year after the experiment and an epidemiologic strategy for the longitudinal analysis extending both the length of time the students were followed and the breadth of coverage from school to juvenile court and police data tends to confirm the positive nature of the original findings. Later analysis also linked the positive finding to the experimental year, demonstrated the continuation of the positive effect into two further years of school behavior and buttressed these findings with similar findings from the juvenile court and police files. Long term follow up, by ordinary standards, has been necessary to learn whether the experiment worked. It was also necessary to collect additional data from new sources, and to change the strategy of the analysis. None of this could have been clearly indicated at the time of the early follow up. Time for the children to experience further school environments was needed, and time for us to begin to see the effects of those environments on dropping out, before we became aware of a very important intervening condition.

Naturally not all of the behavior differences can be attributed to the one year experiment. Many other factors must have impinged on the lives of these children during the time of the follow up. We can only assume that they did so in a somewhat random fashion, equally to the children in the control and the experimental groups. The wonder is that such a small change for only one school year, and as late as the sixth grade had any impact at all.

Dissemination

In addition to less formal contacts with many people who have inquired about the project, several presentations have been made. An abstract was submitted to the World Congress of Sociology this year, and a paper was read at the Midwest Sociological Society meetings near the beginning of the grant period.

A rather extensive presentation was made in September at the University of Kansas Medical Center Workshop, The Roots of Responsibility: Designs for Solving Health Problems of Children and Youth IV. This presentation provided background, a description of the intervention, presentation of findings and a discussion of significance and implications by persons involved in various stages of the parent YDP project, the principal investigator in the grant study reported here, and a representative of the community mental health/prevention movement to an audience selected for its interest in child development, children's health and mental health. [This is a regonal workshop held on an annual basis. We anticipate publishing a proceedings booklet of the type enclosed from last year's workshop, An agenda booklet for the meeting this year is also enclosed.] Many of these remarks are paraphrased in the Background and Significance section of this report.

A seminar will be presented later this year at the Medical Center for an interdisciplinary audience.

Publication of journal articles is anticipated.

RECOMMENDATIONS

The first recommendation suggested by our data is that teachers and school administrators, be encouraged to learn small group techniques if necessary and install them in the classroom if they have not already done so. Workshops should be sponsored by NIMH to motivate and teach school personnel.

If behavioral outcomes such as are reported here can result from one year of such teaching, it is possible that implementation K-12 would change the face of our problem, as it was outlined in the Report of the Joint Commission.

Evaluation should be an important part of installing this program of teaching. Techniques such as we have used are capable of application by school personnel.

We are well aware that the positive finding is for only the lowest socio-economic group in the Kansas City experiment. We have not attempted any data collection or analysis of the material relating to the other socio-economic groups. We do believe that positive findings might well be available if a follow up were to be made similar to the one reported here. Early investigators, who reported no effect for the other groups, were locked into a unit of analysis which could easily obscure what happened and had only three years of follow up data. Using the sixth grade classroom as a unit of analysis fit some of the parent project design. That, and their time line does not allow much flexibility for analysis by later environments, etc.

Further study of the effects of secondary school environments would be very useful. Certainly any new experiments should build this into their evaluation research. Retrospective study of the Kansas City secondary school environments at Lincoln and Central would be necessary before we could make serious recommendations about the most effective secondary school environments for reinforcing the press of the intervention.

The best approach from our point of view is to start teachers utilizing these techniques where they are not already doing so, and evaluate further as we go. We plan to mount a workshop for this purpose, and will be seeking funds.

If we were to proceed in the most scientific way, of course, we would first apply for funds to do the follow up for the other two groups and to analyze the secondary school environments and if that was successful, plan a tightly designed replication in selected cities, carefully analyze that, and then implement.

A more practical approach might be to operate on all these levels concurrently, and might be practical if we could find the support.

What seems most feasible in line with current funding realities, is to begin careful, evaluated implementation now.

Any follow up work should be designed on a basis which can be maintained for at least five years, and incorporate studies of the later environments, if our experience is meaningful. One year evaluations, or tests of attitudes before and after short course instruction did not work. Three year follow up was not long enough. Effects would have remained hidden if we had not taken a longer time period and the later environments into account. This may mean that future NIMH grants, where behavioral outcomes are at stake, may need to require longer follow up than has been the practise up to this time. We would encourage the use of real-life variables and epidemiologic strategies of analysis to assess these outcomes.

If NIMH or HEW believes the findings to be worthwhile, we would like to see widespread dissemination of this report, or an appropriate summary, to persons and organizations concerned about the health of children, problem behavior, juvenile delinquency, crime in the streets, child development, educational processes, social interaction, evaluation of social action programs, epidemiology of mental health, orthopsychiatry etc.

Problems Encountered in the Follow Up

Early on, our greatest problems had to do with tracing the children in the cohort. These problems related to the fact that: 1) we had fairly limited identity material, since the earlier investigation concentrated on the classroom as the unit of analysis; 2) children in the cohort sometimes changed their names informally, registering in a different school under a different name; 3) school records were kept in the school attended, and each school had somewhat unique record keeping habits; 4) some data in the schools was not yet entered in the childrens files, and our assistant had to first post the records in order to add them to our study data; 5) schools in the Kansas City system at that time were fairly autonomous, and therefore were each dealt with singly; 6) children were also relatively autonomous in that they could attend pretty much whichever school they wished, so that there was both a certain amount of mobility and a lack of patterning in terms of which junior high school you might expect a child from X elementary school to attend, making the search for records more difficult; all factors we were able to deal with successfully as discussed in the Methodology section of this report. We were, as a matter of fact, asked to consult with the school system about record keeping as a result of the successful effort in tracing these children.

Our research assistant was able to work in all the files we needed data from, except those at the police department. Another member of the Field Station staff arranged for the police to make the search themselves.

We did not reproduce Dr. Glick's analysis of variance. Our statistical consultants did not recommend that we do so. We had anticipated that Dr. Glick would be able to produce a flow chart for programming his analysis, but this was not the case. Our only reason for proposing to do so was because the early finding had been produced by that method, and at that time we felt it was only fair and proper that any comment on whether that finding persisted be based on replicated processes. Our consultants were able to show us other procedures which did, as a matter of fact, produce a similar finding, extending it both by tying it to the experiment and taking it forward over a longer period of time.

Finding people who could describe the later school environments has been a problem. In several instances, people we really would have liked to interview had moved away, or died. The people we have found have been very gracious, but generally had to refer us to someone else. Unlisted phone numbers, privacy, unwillingness to be quoted and other problems typical of informants generally, have intruded on our effort. We have made every effort to treat people fairly and sensitively in our data collection, and trust we have done so. Our remarks on this subject are a distillation of what we have been able to learn. What we have been able to learn seemed to us to help explain some of our outcome data, and for that we are grateful.

The change in leadership and wind-down of the Field Station in Kansas City created other problems. Priorities changed and funding became a problem. Personnel changed as well. Moving the project to KU and the grant solved most of those problems at that time. Center staff from Washington was most helpful, as were people here at KU. I was already getting biostatistical consultation here at KU, and that made the transition easier. It did take some time to shift to the new computers, etc.

A new academic department may not be the easiest environment for a principal investigator. Problems of tooling up and other early organizational needs took time and energy and interfered somewhat. A personal illness did the same.

More recently, a long hassle over equal pay for equal work required reorganization of our department resulting in the resignation of the first chairman, naming an acting chairman and an extensive departmental review.

A supportive top administration, a very supportive new chairman, cooperation from other members of our staff, resourceful research assistants and a particularly fine secretarial group has made perseverance, and success possible. Center staff has been most understanding and generous in allowing extensions to cope with these problems. A supportive family and interested colleagues make perseverance and success possible, with sanity.

Selected Bibliography

Eisner, Victor. The Delinquency Label: The Epidemiology of Juvenile
1969 Delinquency. New York Random House Inc.

Eaton, J.W., and K. Polk. Measuring Juvenile Delinquency: A Study
1961 of Probation Department Referrals. Pittsburgh, University of Pittsburgh Press.

Hathaway, S.R., and E.D. Monachesi. Adolescent Personality and
1963 Behavior. Minneapolis, University of Minnesota Press.

Kodlin, D., and D.J. Thompson. An Appraisal of the Longitudinal
1958 Approach to Studies in Growth and Development. Monograph of the Society for Research in Child Development, Inc. Volume XXIII, No. 1.

Meehan, Mary. A Teacher Training Program in Classroom Mental Health,
1964 Kansas City Missouri Greater Kansas City Mental Health Foundation.

Meehan, Mary. The Use of Small Groups in the Classroom. Kansas City,
1964 Missouri Greater Kansas City Mental Health Foundation.

Davis, James. Education for Positive Mental Health. Chicago, Aldine
1965 Publishing Company.

Robins, Lee. Deviant Children Grown Up. Baltimore, The Williams and
1966 Wilkins Company.

Bowman, Paul H. Mobilizing Community Resources for Youth. Chicago,
1956 University of Chicago Press.

Powers, Edwin and H. Witmer. An Experiment in the Prevention of
1951 Delinquency. New York, Columbia University Press.

Glidewell, John C., et. al. Methods for Community Mental Health
1957 Research, American Journal of Orthopsychiatry, 28: 38-54.

Glidewell, John C., et. al. Behavior Symptoms in Children and
1959 Adjustment in Public Schools, Human Organization, 18:123-130.

Hunter, Robert. in W. Hartley (ed.), Roots of Responsibility III:
1973 Solutions to Problems of Community Intervention for the Health of Children and Youth, Kansas City, Kansas, University of Kansas Medical Center.

Doll, R.C. Variations Among Inner City Elementary Schools: An
1969 Investigation into the Nature and Causes of Their Differences, Kansas City, Missouri, Center for the Study of Metropolitan Problems in Education.

Clark, Kenneth. Ghetto Education, Center Magazine, Vol. 1, No. 7,
1968 September.

Stanford, G., and A.E. Roark. Human Interaction in Education, Boston,
1974 Allyn and Bacon.

Weiss, Carol. Evaluation Research: Methods of Assessing Program
1972 Effectiveness. Englewood Cliffs, New Jersey, Prentice-Hall Methods of Social Science Series.

Fleischman, E.A. Harris and Burtt. Leadership and Supervision
1955 Industry: An Evaluation of a Supervisory Training Program. Columbus, Ohio. Ohio State University Bureau of Educational Research. Bulletin #33.

Pearson, Karl and J.F. Facher. Criteria for the Existence of
1916 Differential Death Rates. Biometrika, pp. 159-190.